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REPORT

ON THE

Health of the County Borough of Belfast, for the Year 1932

BY

The Medical Superintendent Officer of Health.

Belfast:
PRINTED BY JOHN ADAMS, KING STREET.

1933.

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CHARLES S. THOMSON, M.D. (Glasgow) : M.R.C.P. (Ed.) :
D.P.H. : B.Hy. (University of Durham)
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County Borough of Belfast

PUBLIC HEALTH COMMITTEE,

1932

Chairman :

Alderman J. DUNLOP WILLIAMSON, M.D., J.P.

Deputy Chairman :

Alderman ROBERT PIERCE.

Aldermen :

JAMES ARCHIBALD DORAN, J.P.

HARRY C. MIDGLEY.

ROBERT PIERCE.

JAMES DUNLOP WILLIAMSON, M.D., J.P.

Councillors :

HUGH ARMSTRONG.

THOMAS LOFTUS COLE.

THOMAS HENDERSON, M.P.

JAMES KILPATRICK.

H. P. LOWE, M.B.

JOSEPH MAGUIRE.

THE RIGHT HONOURABLE THE LORD MAYOR (SIR CRAWFORD McCULLAGH, D.L., J.P.)

WILLIAM WALKER MacCLEARY.

CLARKE SCOTT.

WILLIAM JAMES WILLIAMSON.

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COUNTY BOROUGH OF BELFAST—1932.

Summary of Vital Statistics.

Area (Census 1926) (Exclusive of 1,723 acres of tidal water)	14,797 acres.
Population (Census 1926)	415,151
Number of Houses in the City	97,000.
Number of Inhabited Houses	95,700.
Number of Uninhabited Houses	1,300.
Number of Families or Separate Occupiers (Census 1926)	89,724.
Average Number of Persons per Family (Census 1926)	4.58.
Density	28.1 persons to an acre.
Length of Public Streets	Streets classified as I. II. or III. under Ministry of Home Affairs Road Classification Scheme—279 miles, 834 yards. Back streets and passages repairable by the Corporation and used for vehicular traffic—68 miles, 1,742 yards.
Rateable Value at 1st April, 1932	£1,903,156 11s. 0d.
1d. Rate was estimated to produce	£7,400 0s. 0d.
Cost of Public Health Services	£78,959 0s. 0d.
Marriages	2,790
Marriage Rate	6.7 per 1,000 of the population.
Live Births registered	8,882 (Reg. General).
Still Births (not registerable but notifiable)	450
Live Births notified	9,788
Birth Rate (Reg. General)	21.4
Birth Rate average for the ten years, 1923-1932	23.09
Deaths registered	5,783
Death Rate	13.9
Death Rate average for the ten years, 1923-1932	14.16
Deaths of Infants under one year of age	983 (Reg. General)
Infant Mortality Rate	111 deaths per 1,000 births
Average for the ten years, 1923-1932	102 deaths per 1,000 births.
Number of Women dying in, or in consequence of childbirth—	(Notifications of Deaths—Not Registrar-General's figures)
From Sepsis	9
Other Causes	38
Deaths from Epidemic Diseases	380
Death Rate from Epidemic Diseases	0.9
Deaths from Measles	30
Deaths from Whooping Cough	102
Deaths from Diarrhœa and Enteritis under 2 years of age	151
Deaths from Phthisis	448
Death Rate from Phthisis	1.08
Total Deaths from Chest Affections	1,448
Death Rate from Chest Affections	3.49

Public Health Department,
May, 1933.

To the Right Honourable the Lord Mayor, Aldermen and Councillors of the Belfast County Borough.

My Lord Mayor, Aldermen and Councillors,

I have the honour to present to you my Annual Report on the health and sanitary circumstances of the city. These Annual Reports are of two kinds, survey and ordinary. A survey report deals at length with every phase of our work and is called for every fifth year. An ordinary report is not expected to go into the same detail though its compilation is formidable enough. There was a time when an Annual Report was read by nobody, save, perhaps, by the officers of the Central Health Authorities, but fortunately those days have passed away. The Public Health is now, in the opinion of a large body of people, a living, pulsating force, permeating and influencing the lives of all from the cradle (and six months before) to the grave. This interest in health is widespread; associations and societies, as well as separate individuals are seeking reliable information—they want to know. They are asking questions ; is the public milk supply purer than it was ? ; what steps are being taken to purify it ? ; what is the percentage of adulteration now and for the last ten years ? ; is the increase in deaths from Cancer a true increase, or are the heightened figures due to better diagnosis, and to the fact that more people are living to-day at the cancer age ? They seek to know why Typhoid Fever has been banished from Belfast, and they welcome the reply that this is due to the work of a far seeing Sanitary Authority. They notice that Smallpox is an unheard of disease in Belfast, and they recall the days of yester year when the Executive Sanitary Officer reported to the Public Health Committee that " during the last fortnight there were so many cases of Smallpox —of which such and such a number were nursed at home ! " These were the " good old days." The people have heard of Plague, how it came as the Black Death and destroyed twenty-five million people, a quarter of the population of Europe, between 1346 and 1351 ; of how it came as the Great Plague of London in 1665 with 69,000 deaths. They listen with interest to the work of the International Sanitary Convention of 1926, whereby Port Medical Officers are warned weekly of the exact locus of every case of plague throughout the world, and so to the defences set up and maintained to keep out and keep down rats—the purveyors of plague and of many other infections.

Malaria, too, is a subject of interest. Known as Ague, this disease killed James the First and Oliver Cromwell. Why is there no more malaria in the land ? It is due to the steady influence of land drainage, hence destroying the conditions under which mosquitoes multiply. We are tormented in Belfast with mosquitoes but as there are no cases of malaria in Belfast, therefore the mosquito is unable to convey this disease from sufferers to non-infected persons. Nevertheless, mosquitoes can and do cause trouble by their bites. Septic, acrid fluid can give rise to painful sores and worse ; it behoves every householder to see that stagnant pools and water-courses and uncovered water-barrels are drained and covered respectively. Advice on these lines has been advertised and written up in the public press with, I fear, little result. While the department sprays numerous pools and water-courses with paraffin oil mixtures, the public takes little or no interest in attending to their own grounds. The time has come, therefore, when other measures will have to be considered. There was a prosecution recently in Scotland.

It is gratifying to record that such infectious disease as occurred was of minor importance. Reference to the body of the Report will unfurl the facts ; scarlet fever and diphtheria have been regarded as the major probabilities and the principal enemies to contend with. Now scarlet fever to-day is a mild disease—but remember history. The virulence of the causative germs has varied in past centuries and periods. Doubtless in time a severe type of scarlet fever will once again become prevalent. I hesitate to dogmatise as to why we get off comparatively lightly, in a relative sense, so far as diphtheria is concerned. Perhaps one reason is that Belfast is not a tenement city—children do not meet on the stairhead and swap germs by coughing and talk—spraying the germ fauna and flora of their throats into each others faces. Diphtheria is a gangster, a ruthless enemy, without bowels of compassion. It is a twin brother of the garotte, it is an Apache in that it can strike down through the heart. Scarlet fever, on the other hand, belongs rather to the " receiver " class of criminal ; it is liable to be associated with disreputable company such as ear, kidney and heart complications. There is an insidious note about scarlet fever ; rheumatism may arise as a sequela and where that ends no man can predict.

Can nothing be done to stop scarlet fever and diphtheria ? Most certainly it can. I plead with members of the Maternity and Child Welfare Committee to read and ponder over the following. I have not yet asked the Maternity and Child Welfare Committee to make provision in the annual estimates for the money which would enable all children under six years old to be inoculated against both diphtheria and scarlet fever. The reason I have not done this is that first things had to come first, and we had to make a beginning with municipal ante-natal work. This last is the all important need of the times. That service has been inaugurated and is a great success. Coming to Belfast over four years ago, I saw that while Tuberculosis and School Medical Inspection work was thoroughly in hand, Maternity and Child Welfare work was in need of developing. We are doing well, but there is much to be done ; essential services such as Nursery Schools —some four or five, the provision of modern clinics for Child welfare—preferably combined with School Medical Inspection Clinics—the need of two open-air schools for children suffering from early tuberculosis—the need for at least one supervisory centre at a general hospital and a residential hospital school for children suffering from affections connected with rheumatism—all these are urgently needed. Inoculation, then, against scarlet fever and diphtheria requires serious consideration. To explain this, certain medical terms must be made clear. By immunity to a disease we mean that a person is not liable to take it. This immunity is acquired or conferred in different ways, thus, one attack often confers immunity to a disease—a person will not take it again. When I say that eighty to ninety per cent. of children under six years are susceptible to both diphtheria and scarlet fever, I mean that eighty or ninety per cent. are non-immune. Can these children be made immune ? Yes, it is being done every day, and this process is called active immunisation, and it is obtained by an injection under the skin. Aberdeen and Edinburgh were two pioneer cities in this work. Active immunisation has been employed with success for the protection of nurses in the scarlet fever wards of the city hospitals of Aberdeen and Edinburgh. Here are some remarkable results. Before this inoculation to induce immunisation was undertaken in Edinburgh in children under 15 years of age diphtheria occurred in about 6 per 1,000 (for the five years prior to inoculation). Following upon inoculation the attack rate of diphtheria fell to 1.8 per 1,000. It stands to reason that if we inoculate children against diphtheria and scarlet fever, we materially reduce deaths and suffering arising from these diseases, and further we would reduce the cost of maintenance of cases in Purdysburn Fever Hospital.

This work of inoculation has been going on now actively elsewhere for seven or ten years, and we cannot, and we must not lag behind. It can only be done on a voluntary basis and faint hearts may shrink at the opposition and ignorance and prejudice which will have to be overcome amongst parents. I began this work in London several years ago, and whereas parents at first were suspicious, in time they claimed this inoculation—and therefore protection—as a right. Even measles bids fair to take its place as a preventable disease ; at present protection by inoculation against measles has proved to be of the greatest benefit in institutions—it is not yet possible to immunise actively a child population in a city, but it is to be hoped that it will not be long until experience makes its use possible in the community. Meanwhile, we cannot fail to wait any longer as regards diphtheria and scarlet fever. It is through the Child Welfare Centres and the Schools that the propaganda work should be carried out. By apt inculcation we can win over many who will gladly give their sanction that their children should receive this protection. Many there are who will at first refuse, and these will pay the price as has happened before ; meanwhile, it is our bounden duty to go on—to lead, to instruct, to save.

A quarter of a century's experience has taught me that public health publicity must be taken seriously in hand.

In 1932 we had with us the Annual Congress of the Royal Institute of Public Health. Through the courtesy of the Education Committee this Congress was held in the Municipal College of Technology. Many learned men, from far and near, read papers or took part in the discussions. The Rt. Hon. the Lord Mayor most cordially welcomed the great gathering at the University, and the Chancellor, the Most Honourable the Marquis of Londonderry gave an inspiring address. Many citizens in and around Belfast became members of the Congress and the attendance at all the sections was excellent. The Press and the pulpit spread the good news concerning health, and the Prime Minister and high officers of State welcomed us at a memorable reception at Stormont. The reception-ball given by the Lord Mayor will long be remembered. The interest evoked in health through this Congress fortified the department to consider the question of holding a Health Week and Exhibition in Belfast in 1933. From what I have said it will be understood that education of the individual citizen in preventive medicine has been awakened, and it must be fostered and developed. For *Non est vivere, sed valere vita.*

This Annual Report is a record of the year's work in the department. Mr. Zachary, Chief Clerk, presents herein the carefully collected and complicated mass of statistics in the preparation of which he is an expert. All my medical colleagues and health officers have laboured faithfully throughout the year to make people healthier and happier ; their work can be read herewith. There are one or two matters I would mention specially. The interest aroused in Housing grows. Man cannot develop, cannot wax strong spiritually or physically if he is badly housed. We must take a wise view of the situation and not talk glibly about " the slums."

As a city Belfast is remarkably free relatively from slums, this is largely due to the fact that it is a growing city—the rate of expansion prevents the growth of slum areas, the central areas being acquired and cleared to give place to business premises. In this way the palatial dwelling houses centrally situated, and the smaller dwelling houses alike, are gradually disappearing, while more modern dwellings are being provided on the outskirts of the city. This flight from the centre of the city is aided by the fact that the city centre is becoming too valuable for dwelling houses of any type; the rate of growth prevents the formation of slums, as I understand the term. During the past fifty years the city centre has been largely replanned and rebuilt ; as a consequence thousands of houses have been demolished and practically the whole of old Belfast, including about one hundred narrow courts and lanes and their dwelling houses, has been done away with. Thirty-five years ago about seventy-five per cent. of the houses had privy and ashpit accommodation only; these were converted into the water carriage system with the result that typhoid fever is a disease of the past. The old type of houses built back-to-back, that is blocks of houses built back-to-back without separate yards, but having a common yard for each block, have disappeared. The oldest type of house for the working class consists of a kitchen and yard on the ground floor and one bedroom on the first floor; the yard has a water closet and dust bin but no back passage. These are few in number and are to be found in different districts, as examples one may quote Fox Row and Seymour Row with some in Mary Street. The next type consists of kitchen; room off kitchen, and yard on the ground floor, and two rooms on the first floor, the yard has a water closet and dust-bin, but no back passage. Examples of these are to be found in McDonnell Street, Cullingtree Road, and adjoining area. The more modern kitchen house consists of kitchen, room off kitchen, scullery and yard on the ground floor, and two rooms on the first floor, the yard has a water closet, dust-bin and back passage, and the scullery is provided with a sink. Examples of these are to be found in Coolbeg Street, Coolderry Street and the adjoining area. These are the cheapest class of artizan dwellings, and are in greatest demand. The modern subsidy houses are a great improvement on the older type of house; there is evidence of a wish for similar desirable houses at a rent within the compass of some who feel the stress of the times. The oldest class of artizan house is small, poorly lighted and ventilated and is much congested on space. The type of house in the Cullingtree Road area has no back passage, there is congestion on space and the houses have reached that stage when extensive reconditioning is necessary in order to put them into a good sanitary condition. The type of house at Coolbeg Street is more modern and represents a first-class kitchen house at a cheap rent. It is the need of this class of house which leads to larger dwelling houses being converted into tenements. Twenty-years ago there were five thousand houses, mostly of the kitchen class, vacant in Belfast, these have disappeared either by absorption in rebuilding or have become tenanted. Over-crowding does not exist to any great extent, but the necessity for more of the kitchen class of houses at a cheap rent is proved by the number of large dwelling houses which are occupied by several families in each; such are built for and have sanitary accommodation for one family only.

The South side of Donegall Road is being built up with the modern small house, hundreds of this type being provided. Stranmillis and Balmoral Avenue areas are also being built up with the modern villa and semi-detached type. Practically all the available ground for building purposes is being used up, but the house for, which there is the greatest demand should be built.

While full particulars will be found in the body of the report it is necessary at a time when Housing is being discussed to mention in round numbers, the Housing work carried out by the department in 1932. In round numbers there were 90,000 houses in the city in 1932. Twenty-nine thousand houses were inspected as a routine, and fifty-nine thousand re-inspections of the same were made. Twenty-five thousand houses were inspected for specific purposes and two thousand, two hundred houses were inspected in association with the incidence of infectious disease; five hundred came under the wing of the Tuberculosis (Prevention) Act. Approximately fifty-seven thousand houses in the city were inspected in 1932, and all this takes no cognisance of work under the Factory and Workshops Act, etc., etc. The number of defects found and dealt with in these houses was upwards of thirty-nine thousand.

I have dealt above with the city as a whole, but if we look for a moment at the different divisions, we can get a "close-up" view of conditions.

Take the North division ; in a nutshell there is a need of small houses. Over-crowding is not so acute as a few years ago, and it is largely confined to the York Street and North Queen Street areas, and the area between Old Lodge Road and Clifton Street. Many of the streets are narrow and a large number of the houses have no back passage. Many of the houses are in a reasonable state of repair, but there are blocks of houses in different parts of the areas that are so old that the time is approaching when it will be a waste of money to carry out repairs. In the York Street area there are many large houses formerly occupied by one family and containing six to eight rooms now occupied by several families : it would now be impossible to let these houses as single dwelling houses. Of three thousand three hundred and forty houses inspected (as a routine) in 1932, one hundred and two houses were found to be occupied by two families per house, while only four houses were over-crowded. Many of these houses occupied by two families were in areas where the houses were quite modern.

The areas upon which the attention of the department will be concentrated for special investigation in the North Division are : (1) Academy Street area—bounded by Academy Street, Great Patrick Street, Marshall Street, Dunbar Street, Gordon Street, and Hill Street. (2) Lancaster Street area, including some houses in Lancaster Street, Thomas Street, Portland Street, King's Court, Drake's Lane. (3) Alexander Street area, bounded by Frederick Lane, Frederick Street, North Queen Street, and Lancaster Street. (4) Little Patrick Street area, includes some in Little York Street, Tennent's Court, Little Patrick Street, Nelson Street and Great Patrick Street. (5) Hardinge Street area bounded by Artillery Street, Bruslee Street, Ludlow Street, Hardinge Street, and North Queen Street. (6) Upper Library Street area, bounded by Upper Library Street, Wall Street, Allen Street, and Old Lodge Road.

In the East division of Belfast there are only a few areas in which there are some old houses consisting of a kitchen, room adjoining kitchen, and two bedrooms—in some instances consisting of a kitchen, and one room. Although these houses are old they are in a fair state of repair, and are not overcrowded but require constant supervision so as to keep them in a sanitary condition. There is but little over-crowding in the East division ; during 1932 eight thousand seven hundred and thirty-two inspections were made and there were two families in eighty-eight houses. Only six of these houses were over-crowded. The erection of some three thousand, seven hundred and forty-eight houses during the past ten years has greatly diminished over-crowding. In the East, full investigation will be centred on Wallace's Row, Ravenhill Road ; Murray's Place and Hamilton Place, Ravenhill Road ; Clermont Lane, Woodstock Road ; Malcolm Lane, Woodstock Road.

In the West division of the city most of the houses are of the kitchen house type, and are made up of kitchen and two rooms ; there is a demand for a larger type of house with one or two extra rooms. Over-crowding is less than it was a few years ago, and it is centred round about Grosvenor Road, Falls Road, and parts of Shankill Road. The houses there anent are mainly of the kitchen type with nine feet wide paved back passages. The older portion of the district is composed of houses with kitchen and two rooms, without back passage ; some of these are very old and very hard to keep in repair. Some older houses, formerly occupied by one family are let in tenements. In the West division there are 282 houses in certain districts requiring detailed consideration as to whether these are unhealthy areas. Generally these are bounded by Millfield, Brown Street, Wilson Street, Coates Street, and Townsend Street. In more detail these comprise Wilson Street, Letitia Street, McIvor's Place, Bilton Place, Coates Street, Inverness Place, Coates Place, Sackville Street, Johnston Street, Campbell Street South, Townsend Street Place, Mawhinney's Court, Hope's Place, and Little Sackville Street ; in addition there are Samuel Street, Francis Street, Melbourne Court, Millview Place, Coburn Court, Cargill Court, Currell's Place, Reid's Place, Milltown Row, Milltown Cottages.

In the South division, areas for dealing with are (1) Market's area :—East Street, Lagan Street, Smith Street, Verner Street, Stanfield Street, Stanfield Court, Roy Street, Roy Court, Walsh Street, Eliza Street, Keegan Street, Staunton Street, Market Street, and Murphy Street. (2) Falls Road area :—Mary Street, Lemon Street, Lemon Place, Peel Street, Ross Street, Omar Street, Alma Street. (3) Linfield Road area comprising eight streets. (4) Cullingtree Road area comprising fourteen streets. This is an area of cobble paved streets, typical kitchen houses without back passage, and congestion in space.

I have mentioned these matters in some detail as it is necessary that the Council should understand the Housing position in so far as investigations as to what unhealthy areas, if any, we have. The easy use of the word " slum " is strongly to be deprecated. I have had twenty-five years experience and know what " slums " are : here in Belfast there is housing work to be done in insanitary areas, meanwhile I trust that the figures given above as to house inspection done in 1932 and previous years will satisfy the most ardent that the situation is well in hand.

I would close this section of my introductory remarks with my views on what is needed in Belfast for poorer people.

The class of house required is the kitchen class consisting of a good sized kitchen, scullery with sink, yard with water closet and dust bin, together with two or three bedrooms upstairs, the whole to let at from 5/- to 6/- weekly. If the Government provided the ground (thus eliminating ground rents) in place of a subsidy, and if plans and specifications for such a house were submitted for competition to builders, then such a house could be provided.

The Government's function would be to provide the ground only. The Local Authority would superintend the construction. The Plans would be approved by the City Surveyor. The houses would be built by private enterprise. Rules and Regulations would be made regarding terms of occupancy, dividing the responsibility for upkeep, wear and tear, decorations, cleanliness, and general orderliness.

As the careless conduct of many tenants causes the repairs' account to be very high, these regulations would increase the possibility of a low rent, as well as help in educating the public in respect to their responsibilities as householders. In this way the landlord as well as the general public would be benefited, for without such Rules and Regulations any building scheme of small houses might not be a success. Finally most of these houses should be provided not far from the centre of the city, to avoid tram expenses.

From my investigation at Sandleiden in Vienna, I believe that such a step as this would help to solve the Housing difficulty.

Food Inspection. The purity of food and its freedom from adulteration are of the most vital importance. All butchers' meat is now required to be behind windows. Considerable reconstruction has taken place in such premises and meat is no longer exposed to dust, mud, and filth o' that ilk. Further at no great date, similar powers will be obtained so that fruit, sweets, etc., etc., will be dealt with automatically. The chemical and bacteriological results recorded as regards the milk supply show a steady and marked improvement. We do not have inspectorial rights over the milk supplied to the city from outside the city : this is a great pity more especially as there are no County Medical Officers of Health.

As regards ice cream, a commodity which has had a mixed record in relation to disease in the past, premises have now to be registered where it is proposed to use a shop or place for its manufacture or sale.

The Corporation may refuse to register where the premises, utensils or apparatus are unsuitable or where the character of the applicant is unsatisfactory.

Ice cream is a food and should no longer be regarded as a substance which can be prepared and sold by any person who develops an idea that any back room or back yard is a fitting scene for its preparation and storage.

Maternity and Child Welfare.

This is the branch of Public Health work to which increasing attention requires to be paid. Very serious consideration is now being given to the maternal mortality rate. "Mothers who die in the act of child bearing are taken away in the prime of their usefulness and activity. Their passing leaves the home desolate and deprives the family of care and nurture. Of those who survive the complications and sequelae of an untoward labour many are never restored to full health " (Professor Currie). By " maternal mortality " is meant the number of maternal deaths per thousand live births. In Scotland and England and Wales during the present century, though the general death rate (the rate for the whole population of the community from all causes) and the infantile mortality rate have both notably declined, the maternal mortality rate has proved refractory.

In other words, Public Health work has given solid results in a healthier community as regards the people as a whole, and the death rate of infants has been improved out of all recognition, but the deaths of mothers in giving birth to babies is as bad or actually worse than it was twenty years ago. This serious state of affairs led to the appointment of a special committee presided over by Sir George Newman. To appreciate the subject fully, the causes and the remedies, one should obtain a copy of the two reports presented by this special Committee. It would be impossible to do this subject justice in the introduction to an annual report. There are one or two points concerning maternal mortality which may be touched upon. I am bound to draw attention to the fact that at the Louise Margaret Hospital for Women at Aldershot in 1920-23 two thousand women were delivered, all of whom, with one exception, had been ante-natally examined.

The one exception died of mitral disease (heart). Among the rest one death occurred, the cause being pulmonary embolism (blockage of an artery). Similar gratifying results have also been obtained at Woolwich, and in some of the working class Metropolitan Boroughs, like West Ham, Shoreditch and Stepney, possibly owing to the hospital and other facilities available in London. Can it be wondered at that people should be thinking of maternity hospitals and maternity homes as the place of choice for confinements ?

Much of the success of these institutions must be due to the fact that the authorities in charge require that applicants for admission must have ante-natal treatment if they are to be admitted there for their confinement. What do we mean by ante-natal supervision ? The best answer I can give is to publish here and now the results of the ante-natal work carried out in the Municipal ante-natal centres during the calendar year 1932 by my able colleague, Dr. Grace Pollock. We began this work on the first October, 1931. One does not need to be a doctor to appreciate to the full the meaning of these medical terms given in the Table of Abnormalities. Our Professors and their staffs in Belfast have carried out this noble work for years at the hospitals, but the publicity which Public Health work brings to bear has seconded the efforts of our leading obstetricians and gynaecologists, and so a cloud of expectant women has descended upon our Municipal Ante-Natal Centres, and this is what is required. Reference to the findings of Sir George Newman's Committee discloses that death and disaster have occurred in the past because expectant women and their relatives either did not know of the overwhelming importance of, or did not follow advice and undergo ante-natal supervision. There can be no excuse in the future for any man who allows his wife to face her confinement without the necessary ante-natal supervision. Here is the Table.

ANTE-NATAL CLINIC STATISTICS.

For Year Ended 31st December, 1932.

Number of Women Examined	962
Number of Re-Examinations	2,099
Total Attendances	3,061

Abnormalities :—

Abscess of Neck	1	Insomnia	3
Accidental Haemorrhage	1	Incomplete Abortion	2
Albuminuria	232	Laryngitis	1
Anaemia	47	Leucorrhoea	12
Ante Partum Haemorrhage	14	Malpresentation	52
Acute Nephritis	3	Mastitis	1
Bronchitis	10	Neuralgia	1
Cardiac Disease	5	Oedema	7
Contracted Pelvis	12	Post Encephalitic Condition	1
Constipation	107	Phthisis	20
Dental Caries	38	Placenta Praevia	1
Debility	4	Pruritis	5
Dyspepsia	1	Pharyngitis	1
Disproportion	1	Pleurisy	1
Dermatitis	1	Prolapsus Uteri	1
Diarrhoea	4	Pyorrhoea	6
Eczema	2	Paralysis	1
Exopthalmic Goitre	2	Psoriasis	2
Erythema	1	Phlebitis	1
Enteritis	2	Rheumatism	1
Endocarditis	18	Retroverted Uterus	1
Haematemesis	3	Syphilis	4
Haemorrhoids	8	Scabies	2
Hemiplegia	1	Threatened Miscarriage	6
Helminthes	2	Varicose Veins	29
Haemoptysis	1	Vaginitis	1
Hyperiesia	14	Ventral Hernia	1
Hydramnios	8		
Hyperemesis	13		

Not Pregnant .. 26

Infant Mortality. For statistical purposes an infant is a child under the age of one year. Infantile mortality is the frequency of the deaths of infants so defined. The infantile mortality rate in any year is conventionally stated as the number of deaths of infants in that year per 1,000 live births occurring in the same year. Nine hundred and eighty-three infants died in Belfast during 1932, and as the number of births was 8,882 therefore the infant mortality rate was 111. This is deplorably bad. What are the reasons ? I am satisfied that the old adage is true—a high birth rate is associated with a high infant death rate. The birth rate in Belfast was 21.4 per 1,000 of the population, whereas that for big towns and cities across the water is more in the region of 15.4. No doubt this is a delicate subject, but the facts should be faced. The following table gives the causes of death during the year and attention will at once be arrested by the large number of deaths styled " Premature Birth," " Atrophy, debility and marasmus." When the list of deaths is scrutinised with care it will be noticed that the deaths during the first months of life, that is the neonatal death rate, is very high. Here is the Table of causes of deaths :

INFANT MORTALITY, 1932.

CAUSE OF DEATH.	NEO-NATAL	TWO MONTHS	THREE MONTHS	SIX MONTHS
	UNDER ONE MONTH	1—3 MONTHS	3—6 MONTHS	6—12 MONTHS
Measles	—	—	3	9
Diphtheria	—	—	—	2
Whooping Cough	—	13	14	27
Diarrhoea	—	5	7	5
Gastritis, etc.	2	5	2	2
Enteritis	8	34	43	40
Spina Bifida	10	3	1	—
Other Congenital Defects	13	8	4	3
Atrophy, Debility and Marasmus ..	88	24	16	11
T.B. Meningitis	—	1	5	6
Rickets	—	—	—	2
Meningitis (not T.B.)	—	—	3	5
T.B. Peritonitis	—	—	—	1
Premature Birth	169	11	4	—
Convulsions	5	9	11	10
Bronchitis	8	14	10	13
Pneumonia	15	27	47	81
Syphilis	—	—	3	—
Other T.B. Diseases	—	—	2	—
Suffocation	1	1	—	—
Injury at Birth	2	—	—	—
Other Causes	47	9	16	24
TOTAL	368	164	191	241

DEATHS NOTIFIED .. 964 } TOTAL .. 983
„ UNNOTIFIED .. 19 }

How is it that there are so many neonatal (in the first month) deaths ? What are the causes ? The truth is that the causes of these deaths in the first month are related to the ante-natal period ; in other words we have to go back to the state of the mother's health before the child is born. Great mischief is wrought by ante-natal causes. Some of these are to be found in complicated labour, malpresentation, and to a lesser extent in syphilis and toxaemia. Again and again let me repeat that the way to deal with these conditions is by ante-natal examination and supervision.

Social factors, such as housing, have little to do with ante-natal mortality. its origins are within the mother, not around. I am afraid that the stress of the times must be held partly responsible for the high infant death rate in 1932. A high standard of maternal care combined with skilled and sympathetic medical supervision during pregnancy and at the confinement are the factors upon which a low neonatal death rate depend. To this must be added that the exercise of prudence in the number of babies in a family is obviously a significant point. Can we expect a sturdy stock where one baby follows another ? We must concentrate more and more upon the mother. Breast feeding has no satisfactory substitute. The teaching of Fathercraft is overdue and as our provision for clinics grows, the father's obligations to the wife and child alike must be inculcated. The great success which has attended the inauguration of municipal ante-natal centres, combined with the growing public interest in this work hold out great hopes for us that we shall revert soon to the low infant death rate we experienced in 1931. I gladly testify to the enthusiasm of our noble voluntary workers and to the steady day-to-day work of our Health Visitors. Dr. Pollock has made a solid beginning in her work and is an earnest and enthusiastic colleague. I ask the members of the Council to keep this important subject of Maternity and Child Welfare constantly before them.

In conclusion, let me express my gratitude to every one of my colleagues who are applying themselves vigorously to their task, who are keeping abreast of the times by reading, and who are trying in every way to make life happier and better for their fellow men and women. My brother officers in other departments at the City Hall have been most kind and have helped us unstintedly when their assistance has been sought. Especially are thanks due to Alderman Dr. Williamson who, like a giant refreshed, has piloted the department and the Committee throughout the year.

For all the support and kindness of the members of the Council I tender the thanks of a united department.

I have the honour to remain,

My Lord Mayor, Aldermen and Councillors,

Your obedient servant,

CHARLES S. THOMSON,
Medical Superintendent Officer of Health.

BIRTHS.

8,882 births were registered during the year, equivalent to a birth rate of 21.4 per 1,000 of the population. This is a decrease of 1.4 per 1,000, compared with the preceding year, when the number registered was 9,470 and the rate 22.8.

The average number registered annually during the ten years, 1922-1931, was 9.939, and the average annual birth rate 23.46.

The following shews the number of births, the percentage of the total number registered during the year, and the annual birth rate per 1,000 of the population in each of the four quarters of the year :—

		No. of Births	Percentage of Total No.	Birth Rate
First Quarter	..	2,335	26.3	22.5
Second Quarter	..	2,360	26.6	22.7
Third Quarter	..	2,200	24.8	21.2
Fourth Quarter	..	1,987	22.4	19.1

DEATHS.

5,783 deaths were registered from all causes during the year, equivalent to a death rate of 13.9 per 1,000 of the population, a decrease of 0.2 per 1,000 compared with the preceding year, when the number registered was 5,857 and the rate 14.1.

The average number registered annually during the ten years 1922-1931 was 6,031 and the average annual death rate 14.25.

The following shews the number of deaths, the percentage of the total number registered during the year, and the annual death rate per 1,000 of the population in each of the four quarters of the year :—

		No. of Deaths	Percentage of Total No.	Death Rate
First Quarter	..	1,845	31.9	17.8
Second Quarter	..	1,413	24.4	13.6
Third Quarter	..	1,159	20.0	11.2
Fourth Quarter	..	1,366	23.6	13.1

TABLE I.

Shewing the number of deaths, the percentage of the total number registered, and the death rates per 1,000 of the population at various age periods compared with the year 1931.

	1932			1931		
	No. of Deaths	Percentage of total Deaths Registered	Death Rate per 1,000 of the population	No. of Deaths	Percentage of total Deaths Registered	Death Rate per 1,000 of the population
Under 1 year ..	983	17.0	2.4	850	14.5	2.0
1 year and under 5 years	363	6.3	0.9	447	7.6	1.1
5 and under 25 years ..	391	6.8	0.9	447	7.6	1.1
25 and under 45 years ..	701	12.1	1.7	722	12.3	1.7
45 and under 65 years ..	1,462	25.3	3.5	1,538	26.3	3.7
65 years and upwards ..	1,883	32.6	4.5	1,853	31.6	4.5

TABLE II.

Shewing the number of deaths from various causes, together with the percentage of the total number registered and the death rate per 1,000 of the population.

	1932			1931		
Cause of Death.	No. of Deaths	Percentage of total Deaths Registered	Death Rate per 1,000 of the population	No. of Deaths	Percentage of total Deaths Registered	Death Rate per 1,000 of the population
Typhoid Fever ..	1	0.02	0.002	1	0.02	0.002
Typhus Fever ..	—	—	—	—	—	—
Smallpox	—	—	—	—	—	—
Measles	30	0.52	0.07	133	2.27	0.32
Scarlet Fever ..	10	0.17	0.02	13	0.22	0.03
Whooping Cough ..	102	1.76	0.25	32	0.55	0.08
Diphtheria	19	0.33	0.05	13	0.22	0.03
Dysentry	1	0.02	0.002	—	—	—
Influenza	66	1.14	0.16	80	1.37	0.19
Diarrhœa—						
Under 2 years of age	151	2.61	0.36	100	1.71	0.24
Tuberculous Diseases—						
Phthisis	448	7.75	1.08	452	7.72	1.09
Other Forms ..	105	1.82	0.25	104	1.78	0.25
Total Tuberculous Diseases	553	9.57	1.33	556	9.50	1.34
Diseases of the Respiratory System—						
Pneumonia ..	539	9.32	1.30	518	8.84	1.25
Other	461	7.97	1.11	479	8.18	1.15
Total Dis. Resp. System	1,000	17.29	2.41	997	17.02	2.40
Total Chest Affections ..	1,448	25.04	3.49	1,449	24.74	3.49
Cancer	493	8.52	1.19	490	8.37	1.18
Violence	118	2.04	0.28	114	1.95	0.27

TABLE III.

Shewing the annual death rate per 1,000 of the population from all causes during the twenty years 1913-1932 ; also the average rate for quinquennial periods.

Year.	Rate.		Year.	Rate.	
1913 ..	18.8	17.8	1923 ..	13.8	14.2
1914 ..	18.9		1924 ..	14.3	
1915 ..	17.9		1925 ..	14.0	
1916 ..	16.7		1926 ..	15.4	
1917 ..	16.7		1927 ..	13.6	
1918 ..	22.7	17.5	1928 ..	14.0	14.1
1919 ..	17.9		1929 ..	15.6	
1920 ..	17.5		1930 ..	12.9	
1921 ..	14.4		1931 ..	14.1	
1922 ..	14.8		1932 ..	13.9	

TABLE IV.

Shewing the number of Births registered in each of the several Dispensary Districts, also the number of deaths of Infants under 1 year old.

	BIRTHS				DEATHS
DISTRICT	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Under 1 Year
No. 1 ..	103	104	89	86	42
,, 2 ..	245	268	254	220	105
,, 3 ..	272	300	284	259	123
,, 4 ..	215	213	195	206	100
,, 5 ..	117	96	96	91	62
,, 6 ..	133	129	104	125	43
,, 7 ..	18	21	21	10	4
,, 8 ..	31	40	32	39	12
,, 9 ..	223	205	208	170	104
,, 10 ..	176	170	197	134	73
,, 11 ..	222	219	203	179	47
,, 12 ..	153	169	152	130	104
,, 13 ..	117	106	112	111	24
,, 14 ..	—	—	—	—	—
,, 15 ..	172	176	143	110	79
,, 16 ..	138	144	110	117	61
Total ..	2,335	2,360	2,200	1,987	983

TABLE V.

Shewing the Population, the number of Births, the Birth Rate per 1,000, the number of Deaths, the Death Rate per 1,000, and the natural increase during the fifty-two years 1881-1932.

Year	Population	No. of Births	Birth Rate per 1,000	No. of Deaths	Death Rate per 1,000	Natural Increase
1881 ..	207,671	6,942	33.4	4,911	23.6	2,031
1882 ..	207,671	6,820	32.8	5,365	25.8	1.455
1883 ..	214,022	6,694	31.3	5,600	26.2	1,094
1884 ..	216,622	7,231	33.4	5,073	23.4	2,158
1885 ..	219,222	7,161	32.7	6,127	27.9	1,034
1886 ..	221,822	7,344	33.1	5,256	23.7	2,088
1887 ..	224,422	7,502	33.5	5,807	25.9	1,695
1888 ..	227,022	7,719	34.0	5,742	25.3	1,977
1889 ..	229,622	7,705	33.6	5,921	25.8	1,784
1890 ..	232,222	8,250	35.5	6,861	29.5	1,389
1891 ..	255,922	8,650	33.8	6,537	25.5	2,113
1892 ..	261,046	8,592	32.9	6,910	26.5	2,166
1893 ..	275,000	9,399	34.2	6,848	24.9	2,551
1894 ..	285,000	9,349	32.8	6,615	23.2	2,734
1895 ..	295,000	9,772	33.1	7,168	24.3	2,604
1896 ..	300,000	10,378	34.5	6,953	23.2	3,425
1897 ..	310,000	10,481	33.3	7,225	23.3	3,256
1898 ..	340,000	11,234	33.0	7,768	22.8	3,466
1899 ..	350,000	11,437	32.7	7,933	22.7	3,504
1900 ..	359,000	11,192	31.2	7,642	21.3	3,550
1901 ..	350,862	10,859	30.9	7,738	22.4	3,121
1902 ..	360,000	11,113	30.5	7,577	20.8	3,536
1903 ..	360,000	11,488	32.0	7,169	20.0	4,319
1904 ..	360,000	11,323	31.6	7,474	20.8	3,849
1905 ..	360,000	11,395	31.8	7,178	20.0	4,217
1906 ..	366,220	11,355	31.0	7,379	20.1	3,976
1907 ..	370,163	11,233	30.3	7,870	21.3	3,353
1908 ..	380,344	11,490	29.7	7,523	19.5	3,967
1909 ..	386,576	10,900	28.2	7,028	18.2	3,872
1910 ..	391,167	10,888	27.8	7,284	18.6	3,604
1911 ..	386,449	10,984	28.4	6,645	17.2	4,339
1912 ..	391,974	10,884	27.8	7,111	18.1	3,733
1913 ..	396,000	10,996	27.8	7,453	18.8	3,543
1914 ..	399,000	11,337	28.0	7,663	18.9	3,674
1915 ..	403,000	10,196	25.3	7,220	17.9	2,976
1916 ..	390,000	9,415	24.1	6,496	16.7	2,919
1917 ..	393,000	8,718	22.2	6,557	16.7	2,161
1918 ..	393,000	9,282	23.6	8,920	22.7	362
1919 ..	401,000	10,464	25.7	7,278	17.9	3,186
1920 ..	413,000	12,144	29.4	7,234	17.5	4,910
1921 ..	420,000	11,043	26.3	6,045	14.4	4,998
1922 ..	425,000	10,667	25.1	6,304	14.8	4,363
1923 ..	429,000	10,746	25.0	5,910	13.8	4,836
1924 ..	434,000	10,594	23.9	6,329	14.3	4,265
1925 ..	438,000	10,234	23.4	6,131	14.0	4,103
1926 ..	416,000	10,356	24.9	6,411	15.4	3,945
1927 ..	416,000	9,509	22.9	5,653	13.6	3,856
1928 ..	415,151	9,356	22.5	5,804	14.0	3,552
1929 ..	415,151	8,899	21.4	6,462	15.6	2,437
1930 ..	415,151	9,558	22.7	5,451	12.9	4,107
1931 ..	415,151	9,470	22.8	5,857	14.1	3,613
1932 ..	415,151	8,882	21.4	5,783	13.9	3,099

TABLE VI.

Comparative Table of Results in each of 52 weeks. Deaths in Public Institutions of persons *admitted from without the City* omitted.

BELFAST	Week Ending																																																			
	Jan. 0	Jan. 10	Jan. 23	Jan. 30	Feb. 6	Feb. 13	Feb. 20	Feb. 27	Mar. 5	Mar. 12	Mar. 19	Mar. 20	Apl. 2	Apl. 9	Apl. 16	Apl. 23	Apl. 30	May 7	May 14	May 21	May 28	June 4	June 11	June 18	June 25	July 2	July 9	July 16	July 23	July 30	Aug. 0	Aug. 13	Aug. 20	Aug. 27	Sept. 3	Sept. 10	Sept. 17	Sept. 24	Oct. 1	Oct. 8	Oct. 15	Oct. 22	Oct 20	Nov. 5	Nov. 12	Nov. 19	Nov. 26	Dec. 3	Dec. 10	Dec. 17	Dec. 24	Dec. 31
Number of weeks in Annual Series	1	2	3	4	5	0	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	30	40	41	42	43	44	45	46	47	48	49	50	51	52
Births registered	193	182	200	193	172	168	189	107	184	166	167	152	172	212	199	190	185	184	205	190	151	173	166	158	106	160	189	169	204	187	100	165	150	167	154	175	155	142	144	177	134	195	175	170	141	121	150	144	168	148	132	132
Number of Deaths	130	121	142	136	153	154	164	185	166	156	124	125	89	114	111	110	132	107	111	112	94	110	104	97	90	103	97	84	70	100	02	66	93	86	86	85	102	93	99	97	95	88	90	107	82	104	136	117	108	128	106	108
Annual Death-rate per 1,000	16.3	15.2	17.8	17.1	19.2	19.3	20.6	23.2	20.8	19.6	15.6	15.7	11.2	14.3	13.9	14.9	16.6	13.4	13.0	14.1	11.8	13.8	13.1	12.2	12.4	12.9	12.2	10.6	9.5	12.6	11.6	8.3	11.7	10.8	10.8	10.7	12.8	11.7	12.4	12.2	11.0	11.1	11.3	13.4	10.3	13.1	17.1	14.7	13.6	16.1	13.3	13.0
Ages Under 1 year	24	26	35	25	38	35	39	37	40	30	23	15	6	23	11	17	15	16	10	23	17	12	20	21	14	16	16	16	10	10	12	5	19	14	9	20	25	15	23	20	13	17	11	18	8	15	17	16	14	15	13	6
1—5 years	6	5	8	8	8	10	17	16	9	10	12	12	8	0	5	4	7	10	4	0	8	6	7	0	0	6	7	0	2	6	12	5	7	7	0	7	4	3	5	4	4	3	4	2	5	2	6	9	5	7	4	6
5—25	6	3	8	10	8	18	7	7	10	12	4	7	9	6	0	11	14	4	10	4	6	10	5	6	13	7	10	4	4	3	7	8	7	6	9	7	5	4	8	5	6	5	3	8	4	6	14	11	3	8	5	11
25—45	18	13	13	18	20	20	10	19	14	16	15	11	8	14	12	13	19	11	10	12	14	10	19	9	14	12	11	13	7	14	14	11	14	11	8	5	19	14	10	13	15	4	10	15	14	15	15	12	10	14	8	20
45—65	34	20	29	28	31	32	32	39	46	39	33	29	29	10	38	32	27	30	27	28	24	20	20	18	21	33	32	20	22	27	17	15	22	21	24	20	21	28	22	26	25	32	30	29	26	28	40	30	36	27	37	32
65 and upwards	42	54	49	41	48	39	50	67	47	49	37	51	29	43	36	42	50	36	35	39	25	37	27	34	28	29	21	22	31	31	30	22	24	27	27	26	28	29	31	20	32	27	32	35	25	38	44	30	40	57	39	33
Deaths from :—																																																				
Enteric Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	..	..	1	..	1	1	2	..	1	..	2	1	..	2	1	..	3	..	1	2	1	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	1	2	..	..	3	1
Scarlet Fever	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	1	..	..	..	..	2	..	..	..	..	..	1	..	..
Whooping-cough	..	1	..	..	..	2	2	..	2	1	..	3	1	1	..	..	2	2	1	2	3	3	5	6	7	6	4	6	1	2	4	2	4	6	3	2	1	2	1	..	2	1	3	..	..	2	3	2	1	..	..	..
Diphtheria	..	1	1	..	1	1	1	1	..	..	1	..	..	1	2	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	3	..	1	..	..
Dysentery	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Influenza	3	5	2	1	3	3	3	5	6	..	..	0	1	5	2	1	1	1	..	..	..	1	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1	1	..	..	1	1	4	1	2	1	1	..
Tuberculosis Pulmonary	11	7	3	6	16	14	12	9	7	11	8	7	7	9	0	13	13	8	9	9	7	12	5	8	13	9	5	10	7	5	0	8	4	11	8	7	9	8	8	10	9	6	0	5	5	10	6	9	8	8	7	12
Tuberculosis Other Forms	1	1	3	5	3	6	5	1	6	..	3	1	3	..	2	..	5	4	3	..	2	2	2	2	1	1	1	1	..	5	4	2	1	2	1	..	1	..	2	2	2	1	1	1	1	1	3	5	2	3	1	..
Cancer	12	13	11	12	15	7	10	13	9	11	10	6	7	10	9	7	8	8	11	13	13	10	8	6	7	0	8	11	5	6	0	11	8	13	3	9	10	7	10	5	10	8	7	12	13	4	12	10	17	13	10	10
Diseases of Respiratory System Pneumonia	11	15	17	17	32	25	25	31	28	24	17	14	11	6	7	9	0	8	9	6	7	8	15	10	7	2	10	4	2	4	11	2	8	..	7	7	7	8	5	6	4	7	5	6	7	5	6	8	8	12	9	11
Diseases of Respiratory System Others	10	10	21	12	20	17	11	25	32	18	10	13	0	12	8	10	10	7	7	6	5	12	5	5	5	8	0	2	9	5	..	1	2	1	8	3	4	3	4	7	4	3	7	4	6	11	13	12	11	11	6	7
Diarrhœa and Enteritis under 2 years	1	3	5	4	2	3	2	2	2	3	3	1	..	4	3	1	3	5	2	1	5	3	6	8	2	2	1	1	1	1	6	1	4	4	5	0	2	5	7	7	2	7	1	1	2	..	3	1	1	..	2	1
Violent Deaths	..	1	2	4	1	3	1	5	..	3	3	1	1	3	2	..	3	2	3	3	3	3	3	..	3	2	1	2	2	4	2	3	3	3	1	..	2	2	..	2	4	1	3	2	3	..	7	4	1	5	3	3
Number of Uncertified Deaths	4	2	1	..	2	1	5	3	9	5	2	2	3	..	3	2	2	2	2	6	1	1	3	4	2	4	..	1	6	..	2	4	4	4	2	2	3	3	1	2	1	..	..	3	3	..	6	3	3	..	4	3

TABLE VII.

ANALYSIS OF DEATHS REGISTERED.

CAUSES OF DEATH.	AGE.																								SEX.		TOTAL
	Under 1 year.	1 year and under 2 years.	2 years and under 3 years.	3 years and under 4 years.	4 years and under 5 years.	Total under 5 years.	5 years and under 10 years.	10 years and under 15 years.	15 years and under 20 years.	20 years and under 25 years.	25 years and under 30 years.	30 years and under 35 years.	35 years and under 40 years.	40 years and under 45 years.	45 years and under 50 years.	50 years and under 55 years.	55 years and under 60 years.	60 years and under 65 years.	65 years and under 70 years.	70 years and under 75 years.	75 years and under 80 years.	80 years and under 85 years.	85 years and over.	Age not known.	Males.	Females.	
INFECTIOUS AND PARASITIC DISEASES.																											
1. Typhoid Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Paratyhoid Fevers	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Undulant Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Measles	12	11	3	2	..	28	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16	12	28
8. Scarlet Fever	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
9. Whooping-cough	54	40	12	3	1	110	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	52	64	116
10. Diphtheria	2	2	..	1	..	5	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	5	8
11. Influenza	4	3	..	..	2	9	3	..	..	1	2	3	2	2	2	1	3	6	7	10	6	2	7	..	28	38	66
12. Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13. Dysentery	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1
14. Plague	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Erysipelas	..	..	1	..	..	1	..	..	..	..	..	..	1	..	2	2	..	..	..	2	1	..	2	..	3	8	11
16. Acute Poliomyelitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17. Encephalitis lethargica	..	..	..	..	..	..	..	..	..	1	2	1	1	1	2	1	3	1	1	..	..	1	..	..	5	10	15
18. Cerebro-spinal Fever	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
19. Glanders	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20. Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
21. Rabies	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22. Tetanus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	1
23. Tuberculosis of the respiratory system	2	1	3	2	..	8	6	7	53	64	54	52	45	38	33	13	10	10	7	3	..	..	..	..	205	198	403
24. Tuberculosis of the central nervous system	12	6	6	..	..	24	5	6	5	1	2	1	..	..	..	2	..	..	..	..	..	..	..	..	23	23	46
25. Tuberculosis of intestines and peritoneum	1	3	2	..	2	8	3	1	3	2	1	2	1	..	..	..	2	..	..	..	..	..	..	..	11	12	23
26. Tuberculosis of vertebral column	..	..	..	..	..	..	..	..	..	..	1	..	1	2	..	1	..	..	..	1	..	..	..	..	2	4	6
27. Tuberculosis of other bones and joints	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2	1	3
28. Tuberculosis of skin and subcutaneous tissues	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
29. Tuberculosis of lymphatic system (abdominal and bronchial glands excepted)	..	2	1	..	..	3	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	4	4

TABLE VII. (continued).

CAUSES OF DEATH.	AGE.																								SEX.		TOTAL.
	Under 1 year.	1 year and under 2 years	2 years and under 3 years.	3 years and under 4 years.	4 years and under 5 years.	Total under 5 years.	5 years and under 10 years	10 years and under 15 years	15 years and under 20 years.	20 years and under 25 years.	25 years and under 30 years.	30 years and under 35 years.	35 years and under 40 years.	40 years and under 45 years.	45 years and under 50 years.	50 years and under 55 years.	55 years and under 60 years.	60 years and under 65 years.	65 years and under 70 years.	70 years and under 75 years	75 years and under 80 years.	80 years and under 85 years.	85 years and over.	Age not known.	Males.	Females.	
30. Tuberculosis of genito-urinary system	..	..	..	..	..	..	..	..	1	1	..	1	1	..	..	1	..	..	..	..	..	..	..	..	3	2	5
31. Tuberculosis of other organs ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
32. Disseminated tuberculosis ..	..	1	1	1	1	4	1	2	3	2	3	2	3	1	1	..	2	1	1	1	..	..	..	..	15	12	27
33. Leprosy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
34. Syphilis	3	..	..	..	..	3	..	..	..	..	1	..	..	..	2	..	..	..	..	..	..	..	..	..	3	3	6
35. Other venereal diseases ..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
36. Purulent infection, Septicæmia ..	1	1	..	..	1	3	1	1	3	..	1	2	3	..	..	..	..	1	..	1	..	..	..	..	10	6	16
37. Yellow Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
38. Malaria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
39. Other diseases due to protozoa ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
40. Ankylostomiasis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
41. Hydatid cysts	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
42. Other diseases due to helminths ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
43. Mycoses	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
44. Other infectious or parasitic diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals of Infectious and Parastic Diseases	91	70	29	9	8	207	27	20	69	72	67	65	58	46	43	21	20	19	17	18	7	3	9	..	384	404	788
II. CANCER AND OTHER TUNOURS.																											
45. Cancer of the buccal cavity and pharynx	..	..	..	..	..	..	..	1	..	1	..	..	2	1	5	3	8	9	9	5	1	1	..	..	30	16	46
46. Cancer of the digestive organs and peritoneum	..	..	..	..	..	..	..	..	..	..	2	1	4	13	11	19	35	51	61	41	25	11	..	..	130	144	274
47. Cancer of the respiratory organs ..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	2	3	3	2	2	2	..	..	..	..	10	7	17
48. Cancer of the uterus	..	..	..	..	..	..	..	..	..	..	..	..	4	6	6	5	7	4	7	1	2	..	..	..	..	42	42
49. Cancer of other female genital organs	..	..	..	..	..	..	..	..	..	..	1	..	3	..	..	1	1	1	1	1	1	..	..	..	..	10	10
50. Cancer of the breast	..	..	..	..	..	..	..	..	..	..	..	..	3	6	2	4	7	4	8	6	1	1	..	..	1	41	42
51. Cancer of the male genito-urinary organs	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	3	6	3	3	..	1	..	18	..	18
52. Cancer of the skin	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	2	2	1	1	..	..	3	5	8
53. Cancer of other or unspecified organs	..	..	..	..	..	..	1	..	..	1	..	..	..	3	4	3	4	7	5	6	4	1	..	..	17	22	39
54. Non-malignant tumours ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	1	2	3
55. Tumours of undetermined nature ..	..	..	1	..	..	1	..	..	1	..	..	2	1	5	3	3	7	6	1	3	..	1	..	..	18	16	34
Totals of Cancer and other Tumours ..	..	..	1	..	..	1	1	1	1	2	3	5	17	35	33	44	73	89	102	71	38	16	1	..	228	305	533

TABLE VII. (continued).

CAUSES OF DEATH.	AGE.																								SEX.		TOTAL
	Under 1 year.	1 year and under 2 years.	2 years and under 3 years.	3 years and under 4 years.	4 years and under 5 years.	Total under 5 years.	5 years and under 10 years.	10 years and under 15 years.	15 years and under 20 years.	20 years and under 25 years.	25 years and under 30 years.	30 years and under 35 years.	35 years and under 40 years.	40 years and under 45 years.	45 years and under 50 years.	50 years and under 55 years.	55 years and under 60 years.	60 years and under 65 years.	65 years and under 70 years.	70 years and under 75 years.	75 years and under 80 years.	80 years and under 85 years.	85 years and over.	Age not known.	Males.	Females.	
III. RHEUMATISM, DISEASES OF NUTRITION AND OF ENDOCRINE GLANDS AND OTHER GENERAL DISEASES.																											
56. Rheumatic Fever	..	..	..	..	..	..	4	2	2	1	2	1	2	..	1	1	2	1	3	..	..	..	..	..	10	12	22
57. Chronic rheumatism, Osteoarthritis	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	2	3	2	6	2	1	1	1	..	4	16	20
58. Gout	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
59. Diabetes	..	..	..	1	..	1	..	..	..	..	1	3	..	..	1	2	6	4	3	11	5	1	..	..	19	19	38
60. Scurvy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
61. Beri-beri	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
62. Pellagra	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
63. Rickets	2	3	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	5
64. Osteomalacia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65. Diseases of the pituitary gland ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
66. Diseases of the thyroid and parathyroid glands ..	..	..	..	..	..	..	..	..	1	..	1	..	..	2	2	2	3	1	2	..	..	..	..	..	3	11	14
67. Diseases of the thymus ..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
68. Diseases of the adrenals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
69. Other general diseases ..	2	..	..	..	..	2	..	..	..	..	..	..	..	2	1	..	..	..	..	1	..	..	..	..	2	4	6
Totals of Rhematism, etc.	4	3	..	1	..	8	4	2	3	1	5	4	3	4	6	7	14	8	14	14	6	2	1	..	42	64	106
IV. DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS.																											
70. Hæmorrhagic conditions ..	3	..	..	..	..	3	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	3	4
71. Anæmia, Chlorosis	..	..	..	..	..	..	..	..	1	2	..	..	1	1	..	4	4	3	1	3	..	..	..	..	8	12	20
72. Leukæmia, Aleukæmia ..	..	..	..	..	1	1	2	1	2	..	1	1	1	1	..	2	1	..	2	1	..	..	..	..	11	5	16
73. Diseases of the spleen	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
74. Other diseases of the blood and blood-forming organs ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals of Diseases of the Blood, etc. ..	3	..	..	..	1	4	2	1	3	2	1	1	2	2	..	7	5	3	4	4	..	..	..	..	21	20	41
V. CHRONIC POISONING.																											
75. Alcoholism (acute or chronic) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1
76. Chronic poisoning by other organic substances	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
77. Chronic poisoning by mineral substances	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals of Chronic Poisoning ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1
VI. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.																											
78. Encephalitis	..	..	..	..	..	..	..	..	1	..	2	..	1	..	1	2	..	1	..	..	..	..	..	..	3	5	8
79. Meningitis	8	5	2	2	..	17	3	2	..	2	..	..	..	1	1	..	1	..	..	..	..	1	..	..	14	14	28
80. Tabes dorsalis (Locomotor ataxy) ..	..	..	..	..	..	..	—	..	..	..	..	..	..	2	3	2	3	1	..	..	..	..	..	..	11	..	11
81. Other diseases of the spinal cord ..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1	3	..	..	..	..	..	5	1	6
82. Cerebral hæmorrhage, apoplexy, etc.	12	..	..	..	..	12	..	1	..	3	2	2	8	6	17	24	43	56	66	59	63	28	14	..	178	226	404

TABLE VII. (continued).

CAUSES OF DEATH.	AGE.																							SEX.		
	Under 1 year.	1 year and under 2 years.	2 years and under 3 years.	3 years and under 4 years.	4 years and under 5 years.	Total under 5 years.	5 years and under 10 years.	10 years and under 15 years.	15 years and under 20 years.	20 years and under 25 years.	25 years and under 30 years.	30 years and under 35 years.	35 years and under 40 years.	40 years and under 45 years.	45 years and under 50 years.	50 years and under 55 years.	55 years and under 60 years.	60 years and under 65 years.	65 years and under 70 years.	70 years and under 75 years.	75 years and under 80 years.	80 years and under 85 years.	85 years and over.	Age not known.	Males.	Females.	TOTAL
83. General paralysis of the insane ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
84. Other forms of insanity ..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	2	1	..	..	..	1	..	..	4	3	7
85. Epilepsy	..	..	..	..	..	..	..	1	1	..	1	1	1	1	..	1	1	2	..	1	..	..	..	..	5	6	11
86. Infantile convulsions (under 5 years of age)	35	4	..	1	..	40	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	20	20	40
87. Other diseases of the nervous system	1	..	..	..	..	1	1	..	..	..	..	1	1	..	2	2	4	1	6	1	3	1	..	..	12	12	24
88. Diseases of the eye and annexa ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
89. Diseases of the ear and of the mastoid sinus	..	2	..	..	..	2	..	..	1	1	1	..	..	..	..	1	..	..	..	1	..	..	..	..	3	4	7
Totals of Nervous System, etc. ..	56	11	2	3	..	72	5	4	3	6	7	5	11	10	24	33	55	63	75	62	66	31	14	..	255	291	546
VII. DISEASES OF THE CIRCULATORY SYSTEM.																											
90. Pericarditis	..	..	..	..	..	..	..	1	1	..	1	1	..	..	..	..	..	..	1	..	..	..	..	..	2	3	5
91. Acute endocarditis	..	..	..	..	..	..	..	..	..	3	2	2	1	..	..	1	1	..	1	1	..	..	..	..	6	6	12
92. Chronic endocarditis, Valvular disease	..	..	1	..	1	2	5	6	4	4	5	7	8	11	10	18	12	21	17	25	8	6	2	..	64	107	171
93. Diseases of the myocardium ..	..	..	2	..	..	2	..	1	..	..	..	2	5	10	9	30	38	61	86	74	69	28	24	..	195	244	439
94. Diseases of the coronary arteries, Angina pectoris	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	9	10	10	9	6	4	4	..	..	31	25	56
95. Other diseases of the heart ..	..	..	..	..	..	..	..	..	1	..	..	2	3	6	7	7	25	18	30	17	9	12	1	..	53	85	138
96. Aneurysm	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	1	1	1	..	..	..	..	..	5	1	6
97. Arterio-sclerosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	5	8	8	20	24	5	5	3	1	38	43	81
98. Gangrene	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	2	2	5	3	2	..	..	8	8	16
99. Other diseases of the arteries ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1
100. Diseases of the veins (varix, hæmorrhoids, phlebitis, etc.) ..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	1	..	..	..	..	1	3	4
101. Diseases of the lymphatic system (lymphangitis, etc.)	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	2	2
102. Abnormalities of blood pressure ..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	8	6	8	11	7	1	2	..	..	21	26	47
103. Other diseases of the circulatory system	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	1	1	2
Totals of Circulatory System ..	1	..	3	..	2	6	5	8	6	7	8	14	19	30	36	80	104	129	179	160	99	59	30	1	426	554	980
VIII. DISEASES OF THE RESPIRATORY SYSTEM.																											
104. Diseases of the nasal fossæ and annexa	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
105. Diseases of the larynx ..	2	..	..	1	1	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	4
106. Bronchitis	45	8	3	1	..	57	2	..	..	..	1	2	9	15	11	24	36	43	53	61	57	20	10	..	193	208	401
107. Broncho-pneumonia	146	74	18	9	2	249	3	..	1	..	1	2	2	2	4	5	9	8	10	12	4	7	1	..	174	146	320
108. Lobar pneumonia	1	2	2	..	..	5	1	1	..	..	1	1	4	2	6	4	4	4	4	2	2	..	..	..	30	11	41
109 .Pneumonia (not otherwise defined)	23	6	4	..	1	34	1	..	1	2	4	6	2	6	6	4	14	8	5	10	4	1	3	..	65	46	111
110. Pleurisy	1	2	..	..	..	3	..	..	1	..	1	2	..	1	1	2	2	3	..	2	..	..	..	..	8	10	18

TABLE VII. (continued).

CAUSES OF DEATH.	AGE.																							SEX.		
	Under 1 year.	1 year and under 2 years.	2 years and under 3 years	3 years and under 4 years.	4 years and under 5 years.	Total under 5 years.	5 years and under 10 years.	10years and under 15 years.	15 years and under 20 years.	20 years and under 25 years.	25 years and under 30 years.	30 years and under 35 years.	35 years and under 40 years	40 years and under 45 years.	45 years and under 50 years.	50 years and under 55 years.	55 years and under 60 years.	60 years and under 65 years.	65 years and under 70 years.	70 years and under 75 years.	75 years and under 80 years.	80 years and under 85 years.	85 years and over.	Age not known.	Males.	Females.	TOTAL
111. Congestion and hæmorrhagic infarct of lung, etc. ..	23	6	..	..	..	29	1	2	..	..	..	1	3	2	5	2	2	2	4	1	6	4	2	..	37	29	66
112. Asthma	..	..	..	..	..	..	..	..	..	1	1	..	..	4	2	4	1	2	2	..	1	..	..	..	9	9	18
113. Pulmonary emphysema ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	2	..	2
114. Other diseases of the respiratory system	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	2	..	2
Totals of Respiratory System ..	241	98	27	11	4	381	8	3	3	4	9	14	21	32	36	45	69	71	78	88	74	32	16	..	523	461	984
IX. DISEASES OF THE DIGESTIVE SYSTEM.																											
115. Diseases of the buccal cavity, pharynx, etc.	4	3	..	..	..	7	1	..	..	..	..	..	2	..	..	1	1	1	1	..	..	..	..	..	6	8	14
116. Diseases of the œsophagus ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
117. Ulcer of the stomach or duodenum	..	..	..	..	..	..	..	..	..	..	1	4	3	3	5	2	5	1	4	1	..	..	..	..	23	6	29
118. Other diseases of the stomach ..	11	1	..	..	..	12	1	..	..	..	..	..	..	1	2	2	4	3	2	5	2	1	..	..	24	11	35
119 and 120. Diarrhœa and enteritis ..	144	18	5	3	2	172	3	..	..	..	2	1	..	..	4	2	1	2	4	3	1	1	..	..	96	100	196
121. Appendicitis	..	..	1	1	..	2	4	6	4	1	2	2	2	1	1	2	1	4	1	..	..	..	..	..	20	13	33
122. Hernia, Intestinal obstruction ..	3	..	..	..	..	3	..	..	1	..	..	3	2	..	2	7	6	4	10	3	3	..	1	..	28	17	45
123. Other diseases of the intestines ..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	2	1	2	2	1	..	..	..	7	3	10
124. Cirrhosis of the liver	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	2	4	..	1	..	..	..	..	..	5	4	9
125. Other diseases of the liver ..	5	..	..	..	..	5	1	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	5	4	9
126. Biliary calculi	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	3	2	..	..	..	..	2	7	9
127. Other diseases of the gall bladder and ducts	..	..	..	..	..	..	..	..	..	..	..	..	1	4	2	3	2	4	1	2	4	..	..	..	3	20	23
128. Diseases of the pancreas ..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2	..	..	..	..	..	..	3	1	4
129. Peritonitis without stated cause ..	..	..	1	1	1	3	2	..	2	..	..	..	..	..	..	..	2	2	1	..	..	..	..	..	6	6	12
Totals of Digestive System ..	167	22	7	5	3	204	12	6	7	3	6	11	11	11	17	23	30	25	30	18	11	2	1	..	228	200	428
X. NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA.																											
130. Acute nephritis	1	..	..	..	..	1	..	..	1	1	..	2	1	2	3	1	..	..	2	6	..	..	..	..	6	14	20
131. Chronic nephritis	..	..	..	..	..	..	..	..	3	3	5	4	..	3	2	14	2	9	6	3	1	2	1	..	27	31	58
132. Nephritis not stated to be acute or chronic	..	..	..	..	1	1	..	2	..	..	3	2	3	3	1	5	1	2	5	..	1	1	..	..	13	17	30
133. Other diseases of the kidney and annexa	..	..	..	..	1	1	1	..	..	..	2	..	1	1	1	2	1	3	1	1	1	..	..	..	8	8	16
134. Calculi of the urinary passages ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
135. Diseases of the bladder ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	2	1	..	3	1	..	..	7	2	9

TABLE VII. (continued)

CAUSES OF DEATH.	AGE																								SEX		TOTAL.
	Under 1 year.	1 year and under 2 years.	2 years and under 3 years.	3 years and under 4 years.	4 years and under 5 years.	Total under 5 years.	5 years and under 10 years.	10 years and under 15 years.	15 years and under 20 years.	20 years and under 25 years.	25 years and under 30 years.	30 years and under 35 years.	35 years and under 40 years.	40 years and under 45 years.	45 years and under 50 years.	50 years and under 55 years.	55 years and under 60 years.	60 years and under 65 years.	65 years and under 70 years.	70 years and under 75 years.	75 years and under 80 years.	80 years and under 85 years.	85 years and over.	Age not known.	Males.	Females.	
136. Diseases of the urethra, urinary abscess, etc. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	3	1	..	1	1	..	..	..	8	..	8
137. Diseases of the prostate ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	4	9	6	8	1	2	..	31	..	31
138. Diseases of the male genital organs	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	..	2
139. Diseases of the female genital organs	..	1	..	..	..	1	..	..	..	..	..	..	1	..	2	..	..	1	..	..	1	..	..	..	..	6	6
Totals of Genito-Urinary System ..	1	2	..	..	2	5	1	2	4	4	10	8	6	10	12	23	8	22	24	17	16	5	3	..	102	78	180
XI. DISEASES OF PREGNANCY, CHILDBIRTH AND THE PUERPERAL STATE.																											
140. Post-abortive sepsis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
141. Abortion not returned as septic ..	..	..	..	..	..	..	..	..	..	1	2	3	2	..	..	..	..	..	..	..	..	..	..	..	..	8	8
142. Ectopic gestation	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
143. Other accidents of pregnancy	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
144. Puerperal hæmorrhage ..	..	..	..	..	..	..	..	..	..	3	1	4	1	1	..	..	..	..	..	..	..	..	..	..	..	10	10
145. Puerperal sepsis	..	..	..	..	..	..	..	..	1	1	5	2	..	..	..	..	..	..	..	..	..	..		..	..	9	9
146. Puerperal albuminuria and convulsions	..	..	..	..	..	..	..	..	..	4	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..	8	8
147. Other toxæmias of pregnancy ..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
148. Puerperal phlegmasia alba dolens, embolism, and sudden death ..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
149. Other accidents of childbirth ..	..	..	..	..	..	..	..	..	..	1	1	4	1	..	..	..	..	..	..	..	..	..	..	..	..	7	7
150. Other or unspecified conditions of the puerperal state	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	2
Totals of Pregnancy, etc.	..	..	..	..	..	..	..	..	2	10	13	15	6	1	..	..	..	..	..	..	..	..	..	..	..	47	47
XII. DISEASES OF THE SKIN AND CELLULAR TISSUE.																											
151. Carbuncle, Boil	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	3	..	3
152. Cellulitis, acute abscess ..	1	..	..	1	..	2	..	..	..	1	1	1	1	..	..	..	..	2	..	1	..	1	..	..	5	5	10
153. Other diseases of the skin and its annexa	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	1	3	4
Totals of Skin and Cellular Tissue ..	1	1	..	1	..	3	..	..	..	1	1	1	1	1	..	..	1	3	1	2	..	2	..	..	9	8	17
XIII. DISEASES OF THE BONES AND ORGANS OF LOCOMOTION.																											
154. Acute infective osteomyelitis and periostitis	1	..	..	..	1	2	1	2	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	..	6	2	8

TABLE VII. (continued)

CAUSES OF DEATH.	AGE																									
	Under 1 year.	1 year and under 2 years.	2 years and under 3 years.	3 years and under 4 years.	4 years and under 5 years.	Total under 5 years.	5 years and under 10 years.	10 years and under 15 years.	15 years and under 20 years.	20 yearsand under 25 years.	25 years and under 30 years.	30 years and under 35 years.	35 years and under 40 years.	40 years and under 45 years.	45 years and under 50 years.	50 years and under 55 years.	55 years and under 60 years.	60 years and under 65 years.	65 years and under 70 years.	70 years and under 75 years.	75 years and under 80 years.	80 years and under 85 years.	85 years and over.	Age not known.	Males.	Females.	TOTAL.
155. Other diseases of the bones ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
156. Diseases of the joints and other organs of locomotion ..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	..	1	1	..	..	..	3	2	5
Totals of Bones and Organs of Locomotion	1	..	..	..	1	2	1	3	..	..	..	..	..	1	..	1	1	2	..	1	1	..	..	..	9	4	13
XIV. CONGENITAL MALFORMATIONS.																											
157. Congenital Malformations ..	42	1	..	..	..	43	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	26	18	44
XV. DISEASES OF EARLY INFANCY.																											
158. Congenital debility	139	3	1	..	..	143	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	82	61	143
159. Premature birth	184	..	..	..	..	184	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	108	76	184
160. Injury at birth	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
161. Other diseases peculiar to early infancy	14	..	..	..	..	14	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	7	14
Totals of Early Infancy	339	3	1	..	..	343	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	199	144	343
XVI. OLD AGE																											
162. Old age	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	17	50	76	53	60	..	72	188	260
XVII. DEATHS FROM VIOLENCE.																											
163. Suicide by solid or liquid poisons and corrosive substances ..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	1	..	..	2	..	..	..	..	..	..	2	4	6
164. Suicide by poisonous gas ..	..	..	..	..	..	..	..	..	..	..	1	..	1	4	2	3	3	1	2	..	..	..	..	..	13	4	17
165. Suicide by hanging or strangulation	..	..	..	..	..		..	..		..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1	1	2
166. Suicide by drowning ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1
167. Suicide by firearms	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
168. Suicide by cutting or piercing instruments	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
169. Suicide by jumping from high place	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
170. Suicide by crushing	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
171. Suicide by other means ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
172. Infanticide (under one year) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
173. Homicide by firearms ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
174. Homicide by cutting or piercing instruments	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	1
175. Homicide by other means ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
176. Attack by venomous animals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
177. Food poisoning	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
178. Accidental absorption of irrespirable or poisonous gas ..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	1	1	1	..	..	..	..	5	1	6

TABLE VII. (continued).

CAUSES OF DEATH.	AGE																								SEX		TOTAL.
	Under 1 year.	1 year and under 2 years.	2 years and under 3 years.	3 years and under 4 years.	4 years and under 5 years.	Total under 5 years.	5 years and under 10 years.	10 years and under 15 years.	15 years and under 20 years.	20 yearsand under 25 years.	25 years and under 30 years.	30 years and under 35 years.	35 years and under 40 years.	40 years and under 45 years.	45 years and under 50 years.	50 years and under 55 years.	55 years and under 60 years.	60 years and under 65 years.	65 years and under 70 years.	70 years and under 75 years.	75 years and under 80 years.	80 years and under 85 years.	85 years and over.	Age not known.	Males.	Females.	
179. Other acute accidental poisoning (not by gas)	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	1	2
180. Conflagration	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
181. Accidental burns (conflagration excepted)	4	5	..	3	..	12	1	..	1	2	1	..	..	1	1	1	..	..	1	1	..	..	..	..	7	15	22
182. Accidental mechanical suffocation	3	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	3
183. Accidental drowning	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
184. Accidental injury by firearms	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1
185. Accidental injury by cutting or piercing instruments	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
186. Accidental injury by fall, crushing, etc.	..	3	..	2	1	6	6	3	2	1	2	1	3	1	1	2	2	2	4	4	1	3	..	..	32	12	44
187. Cataclysm	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
188. Injury by animals (poisoning by venomous animals excepted)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
189. Hunger or thirst	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
190. Excessive cold	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
191. Excessive heat	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
192. Lightning	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
193. Electricity (lightning excepted)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
194. Other and unstated forms of accidental violence	4	1	..	..	..	5	4	..	..	1	..	1	..	1	1	1	1	..	..	1	..	..	..	1	14	3	17
195. Violent deaths of unstated nature (i.e., accidental, suicidal, etc.)	..	..	..	..	1	1	..	..	..	2	1	..	..	3	..	..	2	2	1	6	2	1	..	..	12	9	21
196. Wounds of war	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
197. Execution of civilians by belligerent armies	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
198. Execution	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Totals from Violence	11	9	..	5	2	27	11	3	4	7	8	3	6	12	10	10	9	8	9	13	3	4	..	1	94	54	148
XVIII. ILL-DEFINED DISEASES.																											
199. Sudden death	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	3	..	3
200. Cause of death unstated or ill-defined	6	1	1	1	..	9	..	..	3	1	3	3	1	3	4	6	9	7	11	6	12	2	1	..	32	49	81
Totals from Ill-defined Diseases	6	1	1	1	..	9	..	..	3	1	3	3	1	3	4	6	10	9	11	6	12	2	1	..	35	49	84
Totals from all causes	964	221	71	36	23	1315	78	53	108	120	141	149	162	198	221	300	400	454	562	524	409	211	136	2	2653	2890	5543

TABLE VIII.

Shewing the Number of Deaths registered as having been caused by Phthisis and Diseases of the Respiratory Organs during the twenty-two years, 1910-1932 :—

Year.	Population	Phthisis	Rate per 1,000	Diseases of the Respiratory System			Total Chest Affections
				Pneumonia	Others	Total	
1910 ..	391,167	825	2.1	622	916	1,538	2,363
1911 ..	386,449	802	2.1	468	788	1,256	2,058
1912 ..	391,974	802	2.0	799	981	1,780	2,582
1913 .	396,000	844	2.1	665	868	1,533	2,377
1914 ..	399,000	836	2.1	701	929	1,630	2,466
1915 ..	403,000	813	2.0	738	929	1,667	2,480
1916 ..	390,000	830	2.1	506	670	1,176	2,006
1917 ..	393,000	932	2.4	614	825	1,439	2,371
1918 ..	393,000	1,051	2.7	1,412	1,608	3,020	4,071
1919 ..	401,000	853	2.1	712	1,104	1,816	2,669
1920 ..	413,000	762	1.8	800	766	1,566	2,328
1921 ..	420,000	677	1.6	511	520	1,031	1,708
1922 ..	425,000	624	1.5	594	648	1,242	1,866
1923 ..	429,000	571	1.3	564	573	1,137	1,708
1924 ..	434,000	605	1.4	623	720	1,343	1,948
1925 ..	438,000	575	1.3	517	646	1,163	1,738
1926 ..	416,000	570	1.4	516	630	1,146	1,716
1927 ..	416,000	515	1.2	479	526	1,005	1,520
1928 ..	415,151	499	1.2	521	542	1,063	1,562
1929 ..	415,151	485	1.2	680	761	1,441	1,926
1930 ..	415,151	436	1.0	357	482	839	1,275
1931 ..	415,151	452	1.1	518	479	997	1,449
1932 ..	415,151	448	1.1	539	461	1,000	1,448

GENERAL PROVISIONS OF HEALTH SERVICES FOR THE AREA.

Hospitals Provided or Subsidised by the Sanitary Authority or by The County Council.

Purdysburn Fever Hospital.

Purdysburn Fever Hospital, was opened for the reception of persons suffering from infectious diseases, in August 1906, with accommodation for 168 patients.

The Hospital is built on the pavilion system, separate blocks being provided for each of the notifiable infectious diseases, with separate administration block, nurses' home, etc., and a suitable isolation block.

The accommodation soon proved insufficient, and in the year 1911 the Public Health Committee decided to increase the accommodation by two additional two-storey buildings and by enlarging the diphtheria block. This extension provided accommodation for 100 beds, bringing the total up to 268 beds. Even with the additional accommodation thus provided, the hospital on several occasions, especially during the recurring epidemics of scarlet fever, proved to be far short of the city's requirements, and in the years 1922 and 1923 the Corporation authorised the enlargement of Nos. 3 and 4 pavilions respectively, together with the provision of additional accommodation for the staff and a new laboratory. These extensions brought the accommodation up to 325 beds.

There is a Smallpox Hospital situated in the same grounds but completely isolated in its own compound. It is self-contained having accommodation for 50 patients in four pavilions with separate administration block and nurses' home and an isolation pavilion.

Union Fever Hospital.

The accommodation for patients in the Union Fever Hospital is 450 beds.

The Hospital is under the control of the Belfast Board of Guardians.

The principal hospitals available for the area which do not come within the scope of "grant" are as follows. All these are honoured and esteemed by all men who realise the admirable work carried out from year to year therein:

The Royal Victoria Hospital.

The Mater Infirmorum Hospital.

Children's Hospital, Falls Road.

The Benn Hospital.

Samaritan Hospital.

Hospital for Nervous Diseases, Claremont Street.

Ophthalmic Hospital, Great Victoria Street.

The Throne Hospital.

It should be understood that this list is not necessarily a complete one.

Tuberculosis.

While the Reports on Graymount and Whiteabbey Sanatoria, by my colleagues Drs. Trimble and Walker, will be found in the body of this Report, the following particulars will be of interest :—

	Municipal Sanatorium, Whiteabbey.	Municipal Hospital for Tuberculous Children, Graymount, and Open-air Day School.
Extent ..	..33 acres.	15 acres and 2 roods.
No. of Beds	..285 (all forms).	58 (non-pulmonary) 150 Places for delicate contacts at Day School.
No. of Teachers.	..Two	Four.
Hours of School	..9-15 a.m.—3-15 p.m.	9-30 a.m.—2-30 p.m. Winter. 9-30 a.m.—3-30 p.m. Summer. (including rest hour and dinner).
Accommodation for Nurses	..16 bedrooms and 3 sitting rooms	1 bed-sitting room 2 sitting rooms. 7 bedrooms.
Visiting Days	..Wednesdays and Sundays 2 till 4 p.m.	Wednesdays and Sundays. 2 till 4 p.m.

MATERNITY.

Maternity Hospital, Townsend Street.

A grant of £1,000 per annum is paid by the Corporation to this hospital. There are four wards and two rooms containing 27 beds. For ante-natal cases there are 3 couches, one dispensary sister being in charge. The staff consists of the matron, intern sister (day), intern sister (night), two staff nurses, and twelve probationers.

As regards payment for treatment, maternity patients are charged at the rate of six shillings per day. In all cases, however, where the circumstances are poor, no charge is made—no poor woman has ever been turned away.

The staff of surgeon accoucheurs consists of four honorary and two resident medical officers, the senior of whom is the tutor. In addition there is one non-resident registrar, also one physician to Infants' Department.

Close co-operation exists between this hospital and the Public Health Department. The Townsend Street Maternity Hospital is justly honoured and respected for the high excellence of the work encompassed. With the passing of time and the increasingly high reputation of this institution with inevitable increased calls upon its accommodation, it has been felt necessary to build a larger hospital and this is now approaching completion within the grounds of the Royal Victoria Hospital.

The accommodation to be provided consists of 100 beds. A ground floor ward will contain 44 maternity beds and a separate ward of 20 beds will be used by paying patients. Every modern improvement will be found : the building and arrangements are admirable. Nurseries, Ante-Natal Out-Patients, Ante-Natal Ward, Isolation Ward, Mothers' Instruction Room, Work Room and Rest Room, Class Room, Study Rooms, and a Laboratory will form part of a great whole.

ANTE NATAL REPORT FOR THE YEAR ENDED 31st DECEMBER, 1932.

Total number of new patients	1.277
do. re-attendances	4,006
Total examinations	5.283

The Ante-Natal Patients admitted to the Hospital were as follows :—

For confinement	475	
treatment and confinement	78	
treatment	155	
operations	39	
		747
Non Ante-natal patients admitted to Hospital		205
Total admissions during year		952

Ante-Natal patients confined in District	155
Non Ante-Natal patients do.	18
	173

Thorndale Home (The Salvation Army).

This home which receives a grant of £300 per annum from the Corporation is situated in its own grounds, Duncairn Avenue. The site is somewhat unique this institution being relatively isolated on rising ground, thus receiving the maximum of sunshine and air perflation. The assistance of the lady in charge, Major Walton, was sought in the preparation of these notes.

Reports on the various Sections of work carried on at above home during 1932.

There are the following Departments :—

(1) A Maternity Home for the unmarried mother.
(2) Wards for Private patients.
(3) An Industrial Home for young girls.
(4) An After-care Home for those who have gone through our hands.

Maternity Home. There is accommodation for 23 expectant unmarried mothers, and the following is a brief review of the work done during 1932 in this department.

35 Unmarried Mothers admitted.
28 Confinements took place.
12 Girls sent to situations.
27 Girls sent home to friends.
1 Girl sent to Infirmary.
13 Babies sent to " Nurse Mothers."
4 Babies admitted.
1 Baby died.
14 Girls in Home end of year.
14 Babies in Home end of year.

The majority of the patients were kept in the home from four to six months after the birth of child so that the little one might be breast fed and by that means give it a fair chance at the beginning of its life.

Private Patients' Department. 49 confinements took place in connection with this department. Some of the patients were unable to come into the Home for domestic reasons and were attended on the District. Attached also to this department are the Ante-Natal and Baby Clinics for the weighing of the little ones and the giving of advice generally to mothers.

Aftercare Home. The secret of success is keeping in touch with the girls after they have left the Home. At this department the girls can return when they have their free time for a holiday, they may bring their little ones from the " Nurse Mothers " and remain until it is time for them to return to their situations. An Officer is set apart for this work and arranges to have Tea Table talks with them. The visits per month average over 654.

Shelter for Poor and Stranded Women. Here there is accommodation for 30 women. Temporary help is given and situations found, and also many free beds and meals are provided.

The Belfast Midnight Mission and Rescue and Maternity Home.

This Home was founded in 1860 and is situated at No. 29 Malone Place. This institution is carrying out work of a high order, and receives a grant of £300 per annum. 257 women and 11 children were admitted to the Rescue Ward during the year and received one or more night's lodging and food—some indeed, remained up to fourteen days in residence.

During the year there were 122 confinements, 38 of which were private patients (married) ; 5 babies were still-born ; 3 infants died. 59 women were attended on the district by the nurses. 140 expectant mothers were seen at the ante-natal clinic by Dr. Robb, with 328 attendances

Infants born in the home are kept in the institution until such time as arrangements can be made for a foster mother, where such is desired. The accommodation is made up of 27 beds for unmarried mothers placed in five wards ; one of these has 14 beds, another has 7. Two rooms have 3 beds each for private patients.

The ante-natal department consists of one examination room and two waiting rooms.

A fee of two guineas per week is charged for private patients.

The staff consists of the matron and three nurses holding the C.M.B. Certificate. There are also four probationers.

The Ulster Hospital, Templemore Avenue.

This excellent Hospital receives a grant of £250 from the Corporation annually. During 1932 there were 791 intern admissions to the Children's department while 7,552 out-patients were treated. 259 women were admitted and 1,547 out-patients received attention. The new cases in the Maternity department numbered 111. 1,620 operations were performed. For Maternity cases there are two beds in one ward ; there are ten additional Beds in another ward for women. For children the accommodation consists of 54 cots in two wards ; there are two balconies one isolation ward and a sun parlour.

The Ante-Natal cases treated in this hospital during the year were as follows ;

New cases in Out-patient Department	..	192
Return cases in Out-patient Department	..	412
Cases admitted to Hospital	..	45

Out of the 791 intern admissions to the Children's Department, 50 died, giving a death rate of only 6.32 per cent.

The resident staff consists of :—

2 House Surgeons.
1 Matron.
5 Sisters.
18 Probationers
1 Masseuse (part-time).

St. Joseph's Babies' Home.

This institution receives a grant of £200 from the Corporation annually. The staff consists of a medical officer, a qualified matron, and one qualified nurse ; there is also a staff of probationer nurses.

The infants admitted here are mostly illegitimate and a proportion of these come from outside the city. The following are the statistics for 1932 :—

Cases admitted in 1932	17
Deaths in Home among cases admitted in 1932. ..	1 (illegitimate)
Deaths in Home during 1932 of admissions prior to 1932.	1 (illegitimate)
TOTAL DEATHS	2
Deaths occurring in 1932 in other Institutions to which cases were removed from this Home. ..	2 (legitimate)
No. of cases of non-resident mothers of the City admitted during 1932.	4
Percentage of deaths of children admitted and died in Home during 1932.	6

Of the 17 children admitted during the year 2 were born outside the City.

AMBULANCE FACILITIES.

(a) **For Infectious Cases.**
(b) **For Non-Infectious and Accident Cases.**

(a) **Infectious Cases.**

Three ambulances (the property of the Belfast Corporation and garaged at Purdysburn Fever Hospital) are available for the conveyance of Infectious Diseases cases to this Hospital.

Three ambulances (the property of the Belfast Board of Guardians and garaged at Union Workhouse) are available for the conveyance of all stretcher cases to the Union Hospitals. These cases include the removal of the minor Infectious Diseases, such as Measles, Whooping Cough, etc.

All the above ambulances are disinfected on return after each journey.

(b) **Non-Infectious Cases.**

Four ambulances the property of the Belfast Corporation and stationed at the Central and Branch Fire Brigade Stations are available for the removal of non-infectious cases to Hospitals and Nursing Homes. Each removal (except accident cases) must be so certified by a medical practitioner. There is a fee of 1/- per mile return journey, charged to the person requisitioning the Ambulance. These ambulances are free of charge and at the immediate call of any person in the case of accidents.

CLINICS AND TREATMENT CENTRES.

Child Welfare Centres.

DAY	CENTRE	TIME	MEDICAL OFFICER.
Monday	Danube Street	2—5 p.m.	Dr. Darling.
	Donegall Road	2—5 p.m.	Dr. Pollock.
	Mervue Street	2—5 p.m.	Dr. Watson.
Tuesday	Dee Street	2—5 p.m.	Dr. Pollock.
	Falls Road	2—5 p.m.	Dr. Watson.
	Charlotte Street	2—5 p.m.	Dr. McNeill.
Wednesday	York Street	2—5 p.m.	Dr. Watson.
	*Ligoniel	2—5 p.m.	Dr. Price.
	Woodstock Road	2—5 p.m.	Dr. Pollock.
Thursday	Shankill Road	2—5 p.m.	Dr. Darling
	Dee Street	2—5 p.m.	Dr. Pollock.
	Byron Street	2—5 p.m.	Dr. Watson.
Friday	Gilford Street	2—5 p.m.	Dr. Price.
	Shankill Road	2—5 p.m.	Dr. Watson.

*Additional Centre commenced 3rd August.

Ante-Natal Clinics.

DAY	CENTRE	TIME	MEDICAL OFFICER.
Monday	Danube Street	10 a.m. till 12 noon	Dr. Pollock.
Tuesday	Dee Street	10 a.m. till 12 noon	do.
Wednesday	York Street	10 a.m. till 12 noon	do.
Thursday	Shankill Road	10 a.m. till 12 noon	do.
Friday	Gilford Street	10 a.m. till 12 noon	do.
	Donegall Road	2 p.m. till 4 p.m.	do.
Wednesdays and Saturdays	Belfast Maternity Hospital Townsend Street	9-30 a.m. till 12 noon	
Do.	Ulster Hospital Templemore Avenue.	do.	

Tuberculosis Clinics.

Central Tuberculosis Institute, Durham Street.	Daily 9-30 a.m. till 5 p.m.
Tuberculosis Institute, 225 Albertbridge Road.	Daily 9-30 a.m. till 5 p.m.

SCHOOL CLINICS.

Central Clinic, Old Town Hall, Victoria Street.

ACCOMMODATION.	DOCTOR'S SESSIONS.
Inspection Clinic.	Daily, 2—5 p.m. (except Saturdays)
Minor Ailments Clinic.	Tuesdays and Thursdays at 3 p.m., Saturdays at 10 a.m.
Eye, Ear, Nose and Throat Clinics.	Mondays, Tuesdays, Wednesdays, and Thursdays at 10 a.m. Alternate Tuesdays and Thursdays—Operations.
Tonsils and Adenoids Operation Clinic.	Every alternate Tuesday and Thursday.
Dental Clinics.	Daily (except Saturdays) 9-30 a.m.
Artificial Light Clinic.	Tuesdays and Fridays 9-30 a.m.
Head Cleansing Clinic.	Daily (except Saturdays) 9-30 a.m.
Special Case Clinic.	Every Saturday 9-30 a.m.

North-West Clinic, 4 Crumlin Road.

Inspection Clinic.	Daily (except Saturdays) 2—5 p.m.
Minor Ailments Clinic.	Tuesdays, Thursdays, 3 p.m. Saturdays 10 a.m.
Eye Clinic	Tuesdays 10 a.m.
Nose and Throat Clinic	Saturdays 10 a.m.
Dental Clinic.	Daily (except Thursdays and Saturdays 9-30 a.m.
Artificial Light Clinic.	Mondays 9-30 a.m., Thursdays 9-30 a.m.
Head Cleansing.	Daily (except Saturdays) 9-30 a.m.
Special Case Clinic.	Every Saturday 9-30 a.m.

Ballymacarrett Clinic, The Mount.

Inspection Clinic.	Mondays, Wednesdays, Thursdays and Fridays, 2—5 p.m.
Minor Ailments Clinic.	Tuesdays and Thursdays 3 p.m. Saturdays 10 a.m.
Eye Clinic	Tuesdays 2 p.m.
Nose and Throat Clinic	Fridays 2 p.m.
Dental Clinic.	Mondays, Wednesdays, Thursdays and Fridays 9-30 a.m.
Head Cleansing Clinic.	Daily at 9-30 a.m. (except Saturdays.)
Special Case Clinic.	Saturdays at 9-30 a.m.

Venereal Diseases Clinics.

Royal Victoria Hospital, Grosvenor Road.	Daily 9 a.m.—11 a.m. (Sundays excepted) Mondays 7 p.m.
Mater Infirmorum Hospital, Crumlin Road.	Tuesdays and Saturdays 9-30 a.m.—11-30 a.m. Thursdays 8 p.m.—10 p.m.
Union Infirmary, Lisburn Road.	Daily from 11 a.m., for admissions.

STAFF.

Medical Superintendent Officer of Health and Port Medical Officer :

CHARLES SAMSON THOMSON, M.D., M.R.C.P., D.P.H., B.Hy., F.R.S.I., Etc. (Lecturer in Practical Public Health Administration and Intern Examiner, Queen's University, Belfast).

Assistant Medical Superintendent Officer of Health, and Executive Saniatry Officer, and Assistant Port Medical Officer.

SAMUEL BARRON, M.R.C.P., D.P.H.

Chief Tuberculosis Officer :

ANDREW TRIMBLE, M.B., B.Ch, D.P.H., J.P.

Chief School Medical Officer :

THOMAS F. S. FULTON, M.B., B.Ch., D.P.H.

Medical Superintendent, Purdysburn Fever Hospital :

A GARDNER ROBB, M.B., BCh., D.P.H.

Resident Medical Superintendent, Municipal Sanatorium, Whiteabbey :

PERCY S. WALKER, M.D., B.Ch., D.P.H.

Visiting Surgeon, Municipal Hospital for Tuberculous Children, Graymount :

HENRY P. MALCOLM, M.C., M.B., M.Ch.

City Bacteriologist :

GEORGE F. TINSDALE, M.B., B.Ch., B.Sc.

Maternity and Child Welfare Medical Officers :

GRACE K. POLLOCK, M.B., B.Ch., B.A.O., D.P.H.	
OLIVE M. DARLING, M.B., B.Ch., D.P.H.	(part-time).
ANNA WATSON, M.B., B.Ch., B.A.O., D.P.H.	do.
M. G. PRICE, M.B., BCh., B.A.O., D.P.H.	do.

Veterinary Inspector, Diseases of Animals Acts :

J. EWING JOHNSTON, M.B.E., M.R.C.V.S. (part-time).

City Veterinarian and Veterinary Inspector of Dairies and Cowsheds :

ALEXANDER McLEAN, M.R.C.V.S., D.V.H.

Public Analyst :

J. HAROLD TOTTON, B.A., B.Sc., F.I.C.

Assistant Tuberculosis Medical Officers :

J. SHAW, M.B., B.Ch., D.P.H.
T. R. V. IRWIN, M.B., B.Ch., D.P.H.
E. P. DEWAR, L.R.C.P. Ed.
H. McMASTER, L.R.C.P. Ed., D.P.H.

Assistant School Medical Officers :

H. A. WARNOCK, M.D., D.P.H., B.Sc.
F. J. DEMPSEY, B.A., L.L.B., M.B., D.P.H.
EILEEN H. DOWSE, M.B., D.P.H. (part-time).
ANNA WATSON, M.B., D.P.H. (part-time).

Resident Medical Officers :

F. F. KANE, M.D., M.R.C.P.I., D.P.H.
H. C. ARMSTRONG, M.B., D.P.H.
D. K. WATTERSON, M.D., D.P.H., Whiteabbey Sanatorium.
A. LAVELLE, M.B., Whiteabbey Sanatorium.

Visiting Medical Officer, Whiteabbey Sanatorium :

J. C. RANKIN, M.D., B.Ch.

Opthalmic Specialists, etc. :

T. W. G. HOGG, M.B., B.Ch. (part-time), School Medical Services.
(Ophthalmic and Aurist Specialist).

I. A. DAVISON, B.A., M.D., D.P.H. (part-time), School Medical Services.
(Ophthalmic Specialist).

WM. S. GIBSON, M.B., B.Ch. (Hons.), (part-time), School Medical Services.
(Aurist Specialist).

Dentists :

C. H. MATTHEWS, L.D.S.	(part-time),	School Medical Services.
A. S. IRVINE, L.D.S.	do.	do.
T. J. GILMORE, L.D.S.	do.	do.
V. G. RATTIE, L.D.S.	do.	do.
O. BLACK, L.D.S.	do.	Tuberculosis Department

HEALTH VISITORS AND NURSES.

Maternity and Child Welfare :

2 Superintendents of Midwives.
19 Health Visitors.

Purdysburn Fever Hospital :

Matron—Miss P. E. SWARBRICK.
Asst. Matron—Miss E. R. GRAHAM.
9 Ward Sisters.
42 Nurses.

Whiteabbey Sanatorium :

Matron—Miss E. WOODS, S.R.N.
5 Sisters.
7 Staff Nurses.
25 Probationers.

Municipal Hospital for Tuberculous Children, Graymount :

Matron—Miss A. E. LYNESS, S.R.N.
1 Sister.
3 Staff Nurses
7 Probationers.

Tuberculosis Institute :

11 Visiting Nurses.

School Medical Services :

14 School Nurses.

PUBLIC HEALTH DEPARTMENT.

Sanitary Sub-Officers, Etc. :

Divisional Inspector, W. J. SEFTON—South Division.
do. do. J. B. BOYD—North Division.
do. do. S. DENNISON—West Division.
do. do. T. SHANNON—East Division.

15 District Sanitary Sub-Officers.
3 Sanitary Sub-Officers—Factory and Workshops—1 Male and 2 Female.
1 Dairy and Cowsheds Inspector (who is also employed part-time under Diseases of Animals Acts).
5 Sale of Food and Drugs Acts Inspectors.
5 Meat Inspectors.
1 Port Sanitary Officer.
1 Lodging House Inspector.
1 Inspector i/c. Disinfectors.
4 Assistant Disinfectors.
1 Manager, Disinfecting Station.
1 Assistant Disinfector, Disinfecting Station.
1 Assistant (Female), at Disinfecting Station.
1 Motor Driver, at Disinfecting Station.
2 Assistant Drain Testers.
1 Storeman.
1 Time and Complaints Clerk.
1 Notice Server.

Clerical Staff :

1 Chief Clerk.
2 Assistants to Chief Clerk.
2 Clerks in charge of Divisions.
3 Senior Clerks.
4 Junior Clerks.
1 Shorthand Writer and Typist.
1 Storeman and General Clerical Attendant.
1 Clerk at Meat Inspection Department.

MATERNITY AND CHILD WELFARE.

Clerical Staff :

1 Senior Cerk.
3 Female Clerks.
1 Junior Clerk.

District Medical Officers of Health (part-time) who are the Dispensary Medical Officers under the Poor Law :

No. 1	Dispensary	District—	Dr. H. A. SKILLEN.
2	do.	do.	Dr. D. KINLEY.
3	do.	do.	Dr. R. ENGLISH.
4	do.	do.	Dr. A. C. GARDINER.
5.	do.	do.	Dr. R. HALL.
6	do.	do.	Dr. G. SCARLETT.
7	do.	do.	Dr. D. WILSON.
8	do.	do.	Dr. C. J. MILLIGAN.
9	do.	do.	Dr. J. KENNEDY.
10	do.	do.	Dr. J. FULTON.
11	do.	do.	Dr. T. E. HILL.
12	do.	do.	Dr. J. D. HAMILTON.
13	do.	do.	Dr. H. R. IRVINE.
14	do.	do.	Dr. W. D. DONNAN.
15	do.	do.	Dr. T. J. KERR.
16	do.	do.	Dr. H. D. HEASLEY.

PROFESSIONAL NURSING IN THE HOME.

"The Society for Providing Nurses for the Sick Poor, Belfast," employs a staff of eleven nurses for district work. The nurses visit the poor in their own homes and in cases of illness apply such ministration and assistance as may be required. Members of the medical profession as well as the clergy of all denominations are invited to bring deserving cases under the notice of the District Matron, but no case can be regularly attended by a nurse unless seen by a doctor.

The Society is dependent upon voluntary subscriptions and gifts in kind to enable it to carry on the magnificent work of alleviating human suffering and caring for the sick poor.

The Corporation has no working arrangement with the Society, but any cases referred to the Society by the Medical Officers of the Public Health services have always received the willing attention of the district nurses.

The district nurses do not attend infectious cases. It is hoped that in the near future the Corporation will come to an arrangement for the home nursing of cases of Measles, Whooping Cough, etc., by the district nurses. Such an arrangement would relieve hospital strain during an epidemic and would also tend to lessen the mortality rate of these diseases.

MIDWIVES.

The Corporation does not employ or pay a subsidy to practising midwives in the city, but, under certain circumstances, pay the fees of any doctors who may be called in, in emergency cases by the midwives, under the Midwives' and Nursing Homes Acts (N.I.) 1918 and 1929.

During the year the services of medical practitioners were requisitioned by midwives in 421 emergency cases. The Corporation paid in fees £209 7s. 6d. to medical practitioners for their attendances at 106 emergency cases.

220 midwives gave the required notice of their intention to practise, of these 202 were certified by examination and 18 otherwise certified.

In order to ensure compliance with the Rules and Regulations of the Joint Nursing and Midwives' Council, the midwives were visited at intervals throughout the year by the Superintendent of Midwives, both at their homes and also at the homes of cases being attended by them. Special attention was given to the personal cleanliness of the midwives and the condition of their homes and the necessary appliances. The registers containing the entries of births attended by them were examined, and were, with very few exceptions, found to be correctly kept.

A number of breaches of the Rules and Regulations were discovered and reported to the Medical Superintendent Officer of Health or the Maternity and Child Welfare Committee.

31 cases of Ophthalmia Neonatorum occurred during the year. All of these completely recovered.

132 cases of Inflammation of Eyes occurred during the year.

63 cases of Puerperal Pyrexia occurred during the year, of these 6 died.

In cases where artificial feeding was resorted to, instructions as to the absolute necessity of cleanliness of the bottles and teats were given. Mothers were also advised to take advantage of the Child Welfare Centres, the benefits both to themselves and their infants being explained to them.

SUMMARY.

Number of Midwives who notified their intention to practise :—

Certified by examinations	202
Otherwise certified	18
	220

SUMMARY OF VISITS AND GENERAL INFORMATION WITH RESPECT TO THE ENFORCEMENT OF THE PROVISIONS OF THE ACT AND RULES AND REGULATIONS MADE PURSUANT THERETO.

Visits by Superintending Midwives :—	
To Midwives certified by examination	991
To Midwives otherwise certified	228
Total Visits to Midwives	1,219
To cases attended by Midwives	636
To Nursing Homes	96
Re Puerperal Fever	9
,, ,, Pyrexia	99
,, Ophthalmia Neonatorum and Inflamed Eyes	121
,, Rise of Temperature	11
To Babies' Homes	34
Re Medical Fees	289
,, Maternal Mortality	38
Miscellaneous Visits	54

Births :—	
Attended by Medical Practitioners	2,860
,, by Midwives certified by examination	3,667
,, by Midwives otherwise certified	223
,, in Union Maternity Hospital	1,044
,, in other Maternity Hospitals	798
,, by Nurses from Maternity Hospitals	240
,, in Malone Place Home	138
,, in Thorndale Home	69
,, in Nursing Homes	539

Notifications received by Medical Superintendent Officer of Health :—	
Under Form A.—Sending for Medical help	421
,, ,, B.—Notification of Death	17
,, ,, C.—Notification of Still birth	450
,, ,, D.—Notification of having laid out a Dead Body	4
,, ,, E.—Source of Infection	6
,, ,, F.—Artificial Feeding	34

Irregularities :—

Number of Midwives reported to Medical Superintendent Officer of Health or Maternity and Child Welfare Committee ..	6
Number of Midwives suspended	21

Number of Midwives disinfected owing to :—

Puerperal Fever	6
do. Pyrexia	13
Rise of Temperature	15
Scarlet Fever	5
Diphtheria	2
Erysipelas	1
Ophthalmia Neonatorum	3
Death in Practice	1
Number of Midwives who died	5

NOTIFICATION OF BIRTHS ACT.

9,683 births were notified pursuant to the Notification of Births Act and in addition 105 were either discovered by Health Visitors or notified by the Registrars of Births, making a total of 9,788 ; of these 5,008 were males and 4,780 were females ; 450 were stillbirths and 476 were illegitimate births.

Of the total number notified 7,434 were selected for visitation and supervision, and during the year 48,732 visits were made.

On visiting a house where a birth has taken place the Health Visitor makes enquiries regarding the family history and with respect to the conditions obtaining in the home. She also makes an examination of the sanitary arrangements, and if any defect is discovered immediate remedial measures are taken.

She gives advice and instruction as to the care of infants and young children, the preparation of food and the storage of milk, butter, &c., and the precautions to be taken to prevent infectious disease.

For a period of twelve months the child is kept under special supervision and its progress recorded, and the mother is advised to attend the Child Welfare Centre in the district in which she resides. After this period there is a general supervision exercised by the Officers in the district, and if children are delicate or not thriving they are kept under supervision as long as is considered necessary.

MATERNITY AND CHILD WELFARE.

There were 12 Centres (14 sessions) in operation during the year, situated at Donegall Road, Danube Street, Mervue Street, Dee Street, Falls Road, York Street, Woodstock Road, Byron Street, Shankill Road, Gilford Street, Charlotte Street and Ligoniel. Ten of these Centres were open one afternoon per week and two were open two afternoons per week, when a Medical Practitioner, properly trained and qualified Health Visitors together with several Voluntary Workers were in attendance.

The work of the Centres consists of a thorough medical examination of babies and medical advice as to their treatment where such is required. Each baby is weighed periodically and the weight recorded in order to ascertain the progress being made and to assist in the discovery of defects or ailments at the earliest possible moment and thus prevent or check any disease which may impede its progress or have a detrimental effect upon its after life. Consultations are held with mothers with respect to their health, and they are advised and instructed in the care of infants and young children and are supplied with instructive literature on the subject. Food, such as Ostermilk, Trufood, Glaxo, Cow and Gate, etc., is supplied at cost price, or free to cases where it is considered the circumstances warrant it. In addition to assisting in the regular work of the Centres, the ladies who assisted voluntarily throughout the year very kindly provided suitable clothing for babies at a nominal charge.

The following table shews the number of names on the roll of each Centre, and the total number of attendances during the year, also the number of babies medically examined and the total number of examinations:—

TABLE No. IX.

	On Roll	Total No. of attendances by mothers.	Babies medically Examined.	Total medical examinations of babies.
Danube Street ..	821	7,381	571	1,397
Donegall Road ..	657	5,572	383	797
Dee Street (two sessions)	919	10,624	511	2,153
York Street ..	567	4,103	394	1,502
Shankill Road (two sessions)	768	8,317	802	1,828
Falls Road ..	613	3,689	580	1,318
Charlotte Street ..	212	1,431	50	706
Mervue Street ..	385	2,999	311	1,326
Woodstock Road ..	447	5,230	245	1,220
Byron Street ..	456	3,871	445	1,260
Gilford Street ..	505	6,604	396	1,888
Ligoniel ..	133	612	103	254
	6,483	60,433	4,791	15,649

In 1931 the total number on the rolls was 5,909 and the total number of attendances 50,080. 4,153 babies were medically examined, the total number of such examinations being 9,955.

The total cost to the Department of Dried Milk, etc., distributed at the several Child Welfare Centres during the year was £2,651 compared with £2,051 during the preceding year. The Dried Milk is given to necessitous cases only, at either cost price under cost price, or free, according to the circumstances of the recipient.

During the year 1932 949 recipients were supplied with 112,833 pints of sweet milk free. The figures for 1931 were 1,611 recipients and 199,787 pints of milk

TABLE No. X.

Shewing the Deaths of children under one year old per 1,000 births each year from 1881-1932.

Year.	Deaths per 1,000 Births.	Year.	Deaths per 1,000 Births.
1881	136	1907	136
1882	151	1908	147
1883	162	1909	139
1884	126	1910	143
1885	170	1911	128
1886	135	1912	129
1887	163	1913	144
1888	145	1914	143
1889	163	1915	137
1890	162	1916	113
1891	149	1917	130
1892	173	1918	144
1893	160	1919	113
1894	160	1920	132
1895	169	1921	115
1896	148	1922	94
1897	166	1923	101
1898	164	1924	107
1899	161	1925	104
1900	152	1926	112
1901	154	1927	101
1902	151	1928	103
1903	134	1929	112
1904	154	1930	78
1905	136	1931	90
1906	144	1932	111

TABLE XI.

Deaths of Infants under One Year old from stated Causes in Weeks and Months, notified to this Department, during the year ended 31st December, 1932.

CAUSE OF DEATH.		Under 1 Week.		1-2 Weeks.		2-3 Weeks.		3-4 Weeks.		Total under 1 Month		1-2 Months.		2-3 Months.		3-4 Months.		4-5 Months.		5-6 Months.		6-7 Months.		7-8 Months.		8-9 Months.		9-10 Months.		10-11 Months.		11-12 Months.		Total Deaths under One Year.		GRAND TOTAL
ALL CAUSES.		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Common Infectious Diseases	Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Chicken-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Measles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	1	..	..	1	2	1	..	2	..	..	1	1	6	6	12
	Scarlet Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Diphtheria : Croup	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1	1	2
	Whooping Cough	..	..	..	..	..	..	..	..	..	..	4	1	4	4	4	2	2	1	4	1	1	1	1	5	2	2	3	4	2	2	1	3	28	26	54
Diarrhœal Diseases	Diarrhœa, all forms	..	..	..	..	..	..	..	..	..	..	3	..	2	..	1	..	3	..	1	2	..	1	1	..	1	..	..	2	..	..	..	..	12	5	17
	Enteritis (*not Tuberculous*)	1	1	..	..	1	1	3	1	5	3	9	10	8	7	7	10	6	10	7	3	6	6	1	2	4	6	4	2	2	2	2	3	61	64	125
	Gastritis, Gastro-intestinal Catarrh	..	..	1	..	1	..	..	..	2	..	3	1	1	..	..	..	..	2	..	..	..	..	..	..	1	..	1	..	..	..	..	..	8	3	11
Wasting Diseases	Premature Birth	83	56	4	6	5	9	5	1	97	72	8	1	..	2	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	108	76	184
	Spina Bifida	1	3	2	4	..	..	..	..	3	7	1	2	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	10	14
	Other Congenital Defects	7	2	2	1	..	..	1	..	10	3	5	..	2	1	..	..	2	1	..	1	1	..	..	..	..	..	..	1	..	..	..	1	20	8	28
	Injury at Birth	2	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
	Want of Breast-milk	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Atrophy, Debility, Marasmus	28	22	11	5	3	4	10	5	52	36	5	9	6	4	6	3	..	1	3	3	3	2	1	..	1	..	1	1	2	..	..	..	80	59	139
Tuberculous Diseases	Tuberculous Meningitis	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	2	1	1	1	..	1	..	1	1	..	..	..	1	..	1	5	7	12
	Tuberculous Peritonitis Tabes Mesenterica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
	Other Tuberculous Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
	Erysipelas	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Syphilis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	3
	Rickets	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2	2
	Meningitis (*not Tuberculous*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	1	2	..	..	..	..	1	1	..	4	4	8
	do. Cerebro-Spinal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Convulsions	..	2	1	..	..	1	..	1	1	4	3	2	1	3	4	1	2	2	2	..	..	..	1	..	2	1	1	1	..	..	1	3	18	17	35
	Bronchitis	..	..	2	..	1	1	1	3	4	4	9	4	..	1	4	1	2	2	..	1	1	..	4	1	3	..	..	1	..	1	..	2	27	18	45
	Laryngitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Pneumonia	..	..	1	1	5	2	5	1	11	4	5	10	6	6	7	6	9	7	11	7	7	8	10	3	13	6	3	11	4	2	9	5	95	75	170
	Suffocation, overlaying	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
	Other Causes	12	16	5	5	4	..	5	..	26	21	3	3	2	1	4	2	2	3	2	3	2	1	3	1	5	1	3	..	1	3	1	3	54	42	96
	Total	135	102	29	22	20	18	30	12	214	154	58	45	32	29	44	28	30	34	32	23	23	19	23	15	38	19	17	25	11	12	16	23	538	426	964

Summary of Visits.

Cases investigated	7,434
,, visited a second time	6,733
,, ,, third time	6,072
,, ,, fourth time	5,348
,, ,, fifth time	4,527
,, ,, sixth time	3,994
,, ,, seventh time	3,322
,, ,, eighth time	2,557
,, ,, ninth time	1,982
,, ,, tenth time	1,570
,, ,, eleventh time	1,235
,, ,, twelfth time	917
,, ,, thirteenth time	749
,, ,, fourteenth time	575
,, ,, fifteenth time	469
,, ,, sixteenth time	324
,, ,, seventeenth time	251
,, ,, eighteenth time	194
,, ,, nineteenth time	142
,, ,, twentieth time	94
,, ,, twenty-first time	71
,, ,, twenty-second time	52
,, ,, twenty-third time	44
,, ,, twenty-fourth time	32
,, ,, twenty-fifth time	23
,, ,, over twenty-five times	21
	48,732

Number of visits re Infant Mortality	780
,, visits to Child Welfare Centres	1,783
,, visits to sick babies	680
,, visits re Infectious Disease	1,112
,, visits to cases discharged from Hospital after Scarlet Fever.	595
,, visits to expectant mothers	1,032
,, miscellaneous visits	1,320
,, visits to mothers	58,481
,, visits to children over 1 year	58,564
,, visits re Tuberculosis	3
,, Visits re Ophthalmia Neonatorum and Inflamed Eyes	523
,, unsuccessful visits	7,955
,, Nursed out babies	1,726

LEGISLATION IN FORCE.

Public Health (Ireland) Acts, 1878 to 1907.
Housing of Working Classes Acts.

BELFAST CORPORATION LOCAL ACTS.

8–9 Vic., Cap.	cxlii (1845).
9–10 Vic., Cap.	ccxciv (1846).
10–11 Vic., Cap.	ccliv (1847).
13–14 Vic., Cap.	cviii (1850).
16–17 Vic., Cap.	cxiv (1853).
27–28 Vic., Cap.	cxcviii (1864).
28–29 Vic., Cap.	clxxxiii (1865).
29–30 Vic., Cap.	cxiii (1866).
31–32 Vic., Cap.	cxvii (1868).
36–37 Vic., Cap.	cxcix (1873).
37–38 Vic., Cap.	cxxv (1874).
40–41 Vic., Cap.	cxxii (1877).
41–42 Vic., Cap.	clxxx (1878).
47–48 Vic., Cap.	xciii (1884).
50 Vic., Cap.	xxiii (1887).
50–51 Vic., Cap.	cxxvii (1887).
52–53 Vic., Cap.	xlii (1889).
53-54 Vic., Cap.	cv (1890).
53-54 Vic., Cap.	cxcii (1890).
54-55 Vic., Cap.	lvii (1891).
55-56 Vic., Cap.	ccx (1892).
55-56 Vic., Cap.	ccxxxi (1892).
59-60 Vic., Cap.	ccxlvi (1896).
60-61 Vic., Cap.	lxxxvi (1897).
61-62 Vic., Cap.	xliv (1898).
61-62 Vic., Cap.	liii (1898).
62-63 Vic., Cap.	ccxlvi (1899).
2 Ed. VII., Cap.	cix (1902).
4 Ed. VII., Cap.	ccxxix (1904).
8 Ed. VII., Cap.	cxxvi (1908).
10 Ed. VII., & 1 Geo. V. Cap.	xlv (1910).
1 & 2 Geo. V., Cap.	cxc (1911).
2 & 3 Geo. V., Cap.	ix (1912).
3 & 4 Geo. V., Cap.	c (1913).
4 & 5 Geo., V., Cap.	xxxviii (1914).
13 & 14 Geo. V., Cap.	v (1923).
14 & 15 Geo. V., Cap.	iv (1924).
15 & 16 Geo. V., Cap.	iii (1925).
20 & 21 Geo. V., Cap.	ii (1930).

Port Sanitary Authority Local Government Board (Ireland) Provisional Orders Conrfimation (No. 4) Act, 1900; 63 & 64 Vic., Cap. ccv.

The Belfast Holywood and Castlereagh Joint Board, L.G.B. (Ireland) Provisional Orders Confirmation (No. 2) Act, 1905, 5 Edw. VII., Cap. cxxiii.

PUBLIC ACTS ADOPTED BY THE COUNCIL.

ACT.	DATE OF ADOPTION.
Baths and Washhouses Act, 1846	1st February, 1854.
Public Libraries (Ireland) Act, 1855	1st December, 1882 (By Plebiscite).
Public Health Acts Amendment Act, 1890 (Part III.)	1st January, 1891.
Infectious Disease (Prevention) Act, 1890	5th March, 1891.
Infectious Disease (Notification) Act, 1889	1st January, 1897.
Housing of the Working Classes Act, 1890 (Part 3)	1st November, 1897.
Notification of Births Act, 1907	2nd December, 1907.
Public Health Acts Amendment Act, 1907 (Parts 7, 8 and 9)	By Order of Chief Secretary for Ireland, dated 9th May, 1908.
Public Health Acts Amendment Act, 1890 (Part 4)	1st April, 1908. 1st May, 1908.
Museums and Gymnasiums Act, 1891 (So much as relates to Museums)	1st February, 1909.
Tuberculosis Prevention (Ireland) Act, 1908 (Part 1)	1st September, 1908.
Public Health Acts Amendment Act, 1907 (Parts 2, 3, 4, 5, 6, and 10)	By Order of L.G.B. for Ireland, dated 20th July, 1910.

BYE-LAWS AND REGULATIONS.

NATURE OF BYE-LAWS.	WHEN MADE.	WHEN CONFIRMED AND BY WHOM.
Advertising Vans	2nd May, 1887.	Confirmation Unnecessary.
Advertising Hoardings	4th Oct., 1889.	L.G.B., 19th Oct., 1900.
Aldermen and Councillors Non-Acceptance of Office	June, 1901.	Lord Lieutenant.
Art Gallery, &c.	1st June, 1905.	L.G.B., 14th Sept., 1905.
do.	1st May, 1930.	Ministry of Home Affairs for Northern Ireland, 27th August, 1930.
Abattoir, Butchers working in	1st July, 1909.	L.G.B., 26th Nov., 1909.
Abattoir, Public—		
Management and Charges	1st Sept., 1913.	L.G.B., 4th Nov., 1913.
do.	3rd April, 1922.	Ministry of Home Affairs for Northern Ireland, 20th May, 1922.
do.	3rd Jan., 1927.	10th March, 1927.
do.	1st April, 1927.	13th May, 1927.
do.	1st Oct., 1929.	29th Nov., 1929.
Baths and Wash-houses	5th April, 1904.	L.G.B., 16th May, 1904.
Buildings—New	1st Feb., 1890.	L.G.B., 30th April, 1890.
Buildings	1st Nov., 1928.	Ministry of Home Affairs for Northern Ireland, 12th Dec., 1928.
Bicycles, etc.	1st Jan., 1898.	L.G.B., 13th Mar., 1898.
Betting in Streets	3rd Feb., 1902.	L. Lieut., 14th Mar., 1902.
Bowling Greens	1st July, 1926.	Ministry of Home Affairs, 23rd August, 1926.
do.	2nd May, 1927.	2nd July, 1927.
Burial Grounds	3rd Jan., 1921. Amended 1st Feb., 1927.	L.G.B., 17th Jan., 1921.
Cattle Drovers	1st July, 1925.	Ministry of Home Affairs for Northern Ireland, 1st Sept., 1925.
Cattle, Passage through Streets	2nd Nov., 1931.	do. 10th Dec., 1931.
Coal, Sale of	1st Aug., 1919.	Board of Trade, 15th Sept., 1919.
Children—Prevention of Cruelty to	1st Aug., 1893.	L. Lieut., 6th October, 1893.
Children's Playgrounds	1st Nov., 1923.	Ministry of Home Affairs, 21st Dec., 1923.
Place of Safety, Nazareth House	1st June, 1906.	
Carriage Traffic—		
At Opera House	1st Jan., 1896.	
At Ulster Hall	1st Dec., 1894.	
Carrick House	16th May, 1902.	L.G.B., 26th July, 1902.

NATURE OF BYE-LAWS.	WHEN MADE.	WHEN CONFIRMED AND BY WHOM.
Conveyances Plying for Public Hire—		
Hackney Carriages	2nd Dec., 1867. and subsequent dates.	Chairman, Quarter Sessions., Jan., 1868, and subsequent dates.
do.	1st April, 1898.	Chairman of Quarter Sessions, 14th Oct., 1898.
do.	1st Sept., 1910.	Recorder of Belfast, 4th Nov., 1910.
do.	2nd April, 1918.	Recorder of Belfast 18th June, 1918.
do.	1st June, 1920.	18th Sept., 1920.
Motor Taxi Cab (Fares)	1st May, 1923.	Chairman of Quarter Sessions, 19th July, 1923.
do. do.	1st March, 1928.	Ministry of Home Affairs, 16th June, 1928.

NOTE.—Under the provisions of the Motor Vehicles (Traffic and Regulation) Act, (N.I.), 1926, the licensing of mechanically propelled Public Service Vehicles to ply for hire passed to the Minister of Home Affairs.

NATURE OF BYE-LAWS.	WHEN MADE.	WHEN CONFIRMED AND BY WHOM.
Dogs, Wearing of Collars by	1st May, 1907.	Confirmation Unnecessary.
Dairies, Cowsheds and Milkshops	1st Sept., 1908.	do.
Drovers of Cattle (see Cattle Drovers).		
Female Domestic Servant's Registries	1st March, 1911.	Chief Secretary for Ireland, 27th April, 1911.
Factory and Workshop	20th June, 1916.	L.G.B., 2nd Aug., 1916.
Hoarding (Advertising)	4th Oct., 1899.	do. 19th Oct., 1900.
House Refuse, Removal of	1st Feb., 1909.	do. 8th April, 1909.
Ice Cream, Manufacture and Sale of	1st Feb., 1927.	Ministry of Home Affairs, 31st March, 1927.
Ice Cream, Premises used for sale of	1st Dec., 1931.	13th Jan., 1932.
Juvenile Street Trading (see Street Trading)		
Lodging Houses—		
Other than Common	1st May, 1876.	L.G.B., 7th June, 1876.
Seamen's	March, 1883.	Board of Trade, 17th March, 1883
Common	2nd Nov., 1903.	L.G.B., 20th Jan., 1904.
Lights on Vehicles	1st Jan., 1901.	do. 18th April, 1901.
Lord Mayor, non-acceptance of Office	June, 1901.	L. Lieutenant, 8th February, 1902.
Locomotives—		
(Streets)	5th June, 1906.	L.G.B., 19th July, 1906.
(Hours)	1st May, 1914.	do. 15th June, 1914.
Markets	1st Feb., 1851.	Chairman Quarter Sessions, 12th. April, 1851.
Grain and Meal Market	1st Sept., 1896.	do. 27th Oct., 1896.
Mortuary	1st Dec., 1895.	
Motor (Taxi) Cabs Plying for Hire (see Conveyances Plying for Hire).		
Meat, Conveyance of	1st May, 1922.	Ministry of Home Affairs, 7th June, 1922.
do. do.	2nd June, 1930.	19th July, 1930.
Meat, Inspection of	1st Dec., 1913.	13th Feb., 1914.
Motor Car Parking Places	2nd Sept., 1929. Additional Order made— 3rd March, 1930.	22nd Oct., 1929.
do.	1st Feb., 1932.	
Offensive Trades	2nd Nov., 1903.	20th Jan., 1904.
do.	2nd Nov., 1914.	11th Dec., 1914.
do.	1st April, 1930.	10th May, 1930.
Omnibuses	1st May, 1931.	26th June, 1931.
Public Parks General	1st Aug., 1923.	27th Sept., 1923.
do.	2nd May, 1927.	2nd July, 1927.
Public Parks	1st Nov., 1928.	18th Dec., 1928.

NATURE OF BYE-LAWS.	WHEN MADE.	WHEN CONFIRMED AND BY WHOM.
Parks, Recreation Grounds, Pleasure Grounds, Open Spaces and Children's Playgrounds	1st March, 1932.	
do.	15th April, 1932.	
Bellevue Gardens and Hazelwood	1st Aug., 1923.	Ministry of Home Affairs (N.I.,) 27th Sept., 1923.
do.	2nd May, 1927.	do. 5th Aug., 1927.
Children's Playgrounds	1st Nov., 1923.	Ministry of Home Affairs, 21st, Dec., 1923.
Regulation of Vehicular Traffic, Ormeau Park	2nd Oct., 1922.	Ministry of Home Affairs (N.I.) 4th Dec., 1922.
Piggeries	1st May, 1894.	L.G.B., 2nd Aug., 1894.
Pork—See " Meat, Conveyance of."		
Public Libraries, Art Gallery and Museum	1st June, 1905.	do. Aug., 1905.
do.	1st May, 1930.	Ministry of Home Affairs, 27th August, 1930.
Public Sanitary Conveniences	2nd Nov., 1908.	do. 2nd Jan., 1909.
Public Service Vehicles	1st May, 1931.	Ministry of Home Affairs, 26th June, 1931.
Places of Public Resort—Regulations re Ingress to and Egress from	1st Nov., 1909. Amended 3rd Nov., 1913.	Confirmation Unnecessary.
School Attendance	2nd June, 1924.	Ministry of Education, 18th Aug., 1924.
do.	1st October, 1929.	21st Dec., 1929.
School Committee, Scheme regulating the Constitution, Powers, Duties and Procedure	2nd Jan., 1928.	
Spitting	4th Aug., 1903.	L. Lieut., 1st September, 1903.
Street Nuisances	6th Nov., 1903.	L. Lieut., 12th Oct., 1905.
Street Traffic	1st June, 1904. 1st Feb., 1906. 1st Oct., 1917. 3rd Oct., 1927. 3rd Dec., 1928. 3rd Feb., 1930. 1st June, 1931. 1st Sept., 1931. 1st March, 1932.	Confirmation Unnecessary.
Street Trading (Juvenile)	1st Oct., 1925.	Ministry of Home Affairs, 16th December, 1925.
Standing Orders of Council	1st Sept., 1930. Amended 1st May, 1931.	
Sheep Scab	1st April, 1915.	
Sanitary Conveniences (see Public Sanitary Conveniences.)		
Swimming Ponds— Regulations for use of	1st April, 1910.	
Tennis Courts	2nd Jan., 1922.	Lord Lieutenant, 9th January, 1922.
Tents, Vans, etc.	1st July, 1919.	
Tramways	2nd Oct., 1905.	Commissioner of Public Works, 2nd December, 1905.
Vehicles, Lights on	1st Jan., 1901.	L.G.B., 18th April, 1901.

PREMISES AND OCCUPATIONS CONTROLLED BY BYELAWS AND REGULATIONS ADMINISTERED BY PUBLIC HEALTH DEPARTMENT.

NATURE OF BYELAW.	NUMBER OF PREMISES	CHARACTER OF PREMISES.
Abattoir— Butchers working in	1 —	City Abattoir. ——
Abattoir— Management and Charges	—	——
Burial Grounds	12 { 3 controlled by Corporation. 9 Private Burial Grounds.	The Burial Grounds under the control of the Belfast Corporation are City Cemetery. Dundonald Cemetery and Knock Cemetery. The City Cemetery is situated about 2½ miles from the centre of the City on the West side of Falls Road. It contains about 45 acres and was opened in the year 1869. Dundonald Cemetery is situated in the parish of Dundonald, about 4 miles distant from the centre of the City. It also contains about 45 acres and was opened in the year 1905. Knock Cemetery is situated on the Knock Road. The private burial grounds are:— Friars' Bush Cemetery, Stranmillis Road. Milltown R.C. Cemetery, Falls Road. Malone Burial Ground, Stockman's Lane. Quakers' Burial Ground, Balmoral Avenue. Old Charitable Institution Burial Ground, Clifton Street. Greencastle Burial Ground, Greencastle. Ballymacarrett Methodist Church Burial Ground, Newtownards Road. St. Matthew's Church Burial Ground, Shankill Road. All the graveyards are regularly inspected by the officers of the Public Health Department in order to ensure that the requirements of the Public Health Act and Byelaws made thereunder are complied with.
Dairies, Cowsheds & Milkshops (Ireland) Order.	88 Cowsheds. 1,695 Milkshops.	

Premises and Occupations Controlled by Byelaws and Regulations administered by Public Health Department—*Continued.*

NATURE OF BYELAW.	NUMBER OF PREMISES	CHARACTER OF PREMISES.
Ice Cream— Manufacture and Sale of	1,000 (approx)	Grocery Shops ; Confectionery Shops ; Fish and Chip Shops ; Kitchen Houses, &c., &c.
Lodging Houses— Common	51	The Common Lodging Houses are old type of houses, situated principally in the centre of the City, with accommodation for lodgers varying from 5 to 319. They consist of :— One—1-storey house ; Eleven—2 stories ; Three—2 stories and attics ; Fourteen—3 stories ; Fifteen—3 stories and attics ; Five—4 stories ; One—basement and 2 stories ; One—basement and 3 stories.
Other than Common	736	
Meat—		
Conveyance of	—	—
Inspection of	—	—
Offensive Trades	21	Hide Stores ; Gut Scrapers ; Bone Boilers ; Soap Manufacturers ; Fellmongers ; Fat Boilers ; Fat Extractors ; Tanners.
Piggeries	—	—
Sheep Scab	—	—
Tents, Vans, &c.	—	—
Rag Flock Act, 1911, Regulations	No rag flock manufactured in Belfast, but flock is sold in approximately 20 premises.	Bedding manufacturers and Upholsterers.

FACTORY AND WORKSHOP ACTS.

Summary of inspections and of sanitary improvements carried out in pursuance of the provisions of above Acts.

FACTORIES.

546 visits were made to factories.
179 nuisances were discovered.
45 Statutory notices for sanitary defects were served.
33 Verbal notices for sanitary defects were given.

SANITARY IMPROVEMENTS.

No. of Factories in which improvements were carried out.	Nature of Improvements.
4	Water closet accommodation provided.
1	Trough closet abolished and water closet provided.
32	Water closets cleansed.
3	Water closets repaired.
2	Walls of water closet apartment limewashed.
2	Doors with suitable fastenings provided to water closets.
12	Intervening ventilated spaces provided between workrooms and water closets.
2	Water closet doors provided with locks and fastenings.
3	Walls and windows repaired.
2	Cisterns repaired.
2	Factories provided with means of ventilation.
3	Drains cleansed.
4	New drains provided.
2	Wash-hand basins provided.
2	Wash-hand basins cleansed.
1	Waste pipe cleansed.
5	Roofs and spoutings repaired.
1	Spouting repaired.
2	Stairs cleansed.
4	Water supply provided.
1	Smoke nuisance abated.
1	Cesspool abolished and drains connected to sewer.
2	Nuisance caused by discharge of dust abated.
1	Dust chamber repaired.
5	Trade refuse removed.

WORKSHOPS.

2,552 workshops on register on 1st January.
139 registered during the year.
79 removed from register during the year.
2,106 visits made.
413 nuisances discovered.
131 statutory notices for sanitary defects were served.
141 verbal notices for sanitary defects were given.

SANITARY IMPROVEMENTS.

No. of Workshops in which improvements were carried out.	Nature of Improvements.
8	Water closet accommodation provided.
4	Separate water closet accommodation provided for females.
2	New basins provided to water closets.
5	Water closets provided with new roofs.
85	Water closets cleansed.
29	Water closets repaired.
1	Cistern provided to sanitary conveniences.
2	Wash-hand basins provided.
2	Wash-hand basins cleansed.

No. of Workshops in which improvements were carried out.		Nature of Improvements.
1	..	Waste pipe cleansed.
11	..	Means of ventilation provided.
1	..	Soil pipe repaired.
2	..	Openings to drain inside workshops closed up.
8	..	New drains provided.
2	..	Yards cleansed.
2	..	Stairs cleansed.
20	..	Workshops cleansed.
40	..	Workshops cleansed and limewashed.
4	..	Water supply provided.
2	..	Cisterns repaired.
4	..	Handrail provided to stairs.
4	..	Hoods and flues provided to gas iron heaters.
18	..	Tiles relaid or floors repaired.
4	..	Smoke nuisances abated.
21	..	Trade refuse removed.
2	..	Dustbins provided.
3	..	Ceilings repaired.
3	..	Roofs repaired.
8	..	Roofs and spoutings repaired.
2	..	Spouting repaired.
2	..	Premises closed on sanitary grounds as unfit to be used as a workshop.

WORKPLACES.

374 Visits were made to workplaces.
40 Nuisances were discovered.
19 Statutory notices were served.
33 Verbal notices given.

SANITARY IMPROVEMENTS.

No. of Workplaces in which Sanitary improvements were carried out.		Nature of Improvements.
1	..	Additional water closet accommodation provided.
1	..	Water closet accommodation provided.
11	..	Water closets cleansed
6	..	Water closets repaired.
2	..	Cisterns repaired.
2	..	Water closets provided with doors.
2	..	Wash-hand basins cleansed.
3	..	Drains cleansed.
1	..	Opening to drain, in apartment where food is stored, closed.
1	..	Flue to carry off offensive fumes provided.
3	..	Yards cleansed.
16	..	Workplaces cleansed and limewashed.
3	..	Workplaces provided with means of ventilation.
2	..	Tiles relaid or repaired.
2	..	Roof and walls repaired.
3	..	Ceilings repaired.
1	..	Dust nuisance abated.
2	..	Stairs cleansed.
2	..	Accumulations of trade refuse or rubbish removed.
1	..	Bedroom ceased to communicate with dining-room.

BAKEHOUSES.

976 Visits were made to bakehouses.
317 Nuisances were discovered.
75 Statutory notices were served.
22 Verbal notices.

SANITARY IMPROVEMENTS.

No. of Bakehouses in which improvements were carried out.		Nature of Improvements.
5	..	Water closets cleansed.
5	..	Water closets repaired.
1	..	Insanitary water closet abolished.
3	..	New sanitary accommodation provided.
4	..	Means of ventilation provided.
4	..	Opening into drain within bakehouse closed up.
4	..	Intervening ventilated spaces to water closets provided.
22	..	Hoods and flues provided to carry off fumes from hot plates and ovens.
4	..	Floors repaired.
3	..	New drains provided.
4	..	Roofs and spoutings repaired.
5	..	Tiles relaid.
4	..	Wash basins cleansed and repaired.
7	..	Closed as unfit to be used as bakehouses.
33	..	Bakehouses cleansed and limewashed.
2	..	Accumulations of trade refuse removed.
2	..	Smoke nuisances abated.
1	..	Animals removed.

All bakehouses were limewashed or otherwise cleansed at least twice during the year.

SHOPS.

3,960 Visits were made by the Female Sanitary Sub-Officers.
74 Statutory notices were served for sanitary defects and want of cleanliness
125 Verbal notices were given for sanitary defects and want of cleanliness.

No. of Shops in which improvements were carried out.		Nature of Improvements.
6	..	Room adjoining shop ceased to be used as a bedroom
8	..	Suitable storage for food provided.
108	..	Premises cleansed.
28	..	Yards cleansed and limewashed.
8	..	Stairs cleansed.
10	..	Water closets cleansed and repaired.
18	..	Water closets cleansed.
2	..	New cisterns provided to water closets.
11	..	Cisterns of water closets repaired.
28	..	Water closets repaired.
3	..	Roofs of water closets repaired.
2	..	Drains cleansed.
15	..	Tiling repaired.
3	..	Flooring repaired.
3	..	Spouting repaired.
1	..	Waste pipes repaired.
20	..	Roofs of premises repaired.
3	..	Walls limewashed.
2	..	Walls repaired.
12	..	Ceilings repaired.
9	..	Water taps repaired.
1	..	New door provided.
1	..	Grating provided to gully trap.
2	..	Dustbins provided.
1	..	Rubbish removed.
1	..	New mantel piece provided.
1	..	New window frame provided.
2	..	Fowl removed from yard and yard cleansed.

TABLE XII.

HOME WORK.

	OUTWORKERS													
	Lists received from Employers						Notices Served on Occupiers as to Keeping or Sending Lists	Prosecutions	Inspections of Outworkers' Premises	Outwork in Unwholesome Premises		Outwork in Infected Premises		Visits to Employers Premises
	Sending Twice in the Year			Sending Once in the Year										
	Lists	Outworkers		Lists	Outworkers			Failing to send Lists		Instances	Notices Served	Instances	Orders Made	
		Contractors	Workmen		Contractors	Workmen								
Wearing Apparel— Making, Cleansing and Washing ..	147	7	453	5	..	15	All Occupiers were Notified	..	1,516	..	..	..	..	..
Household Linen ..	128	265	3,130	4	3	13		..	2,695	129	129	12	12	99
Furniture and Upholstery	4	..	5	..	..	..		..	6	..	..	..	..	..
Paper Bags and Boxes ..	4	..	11	..	..	..		..	11	..	..	..	..	..
Total ..	283	272	3,599	9	3	28		..	4,228	129	129	12	12	99

The approximate number of outworkers over which the department required to exercise supervision during the year was 1,000.

The names and addresses of all outworkers and contractors who resided outside the city were forwarded to the District Council of the District in which they resided.

561 sanitary defects, nuisances, etc., were discovered and remedied.

All work found on infected premises was disinfected.

COMMON LODGING HOUSES.

Number on Register at 1st January	50
Registrations effected during the year	1
Removed from Register during the year	—
Number of lodgers for whom there was accommodation	1,415
Number of visits during the year by lodging-house Inspector ..	2,709
Statutory notices served for nuisances	48
Verbal notices given for nuisances	67
Verbal notices for breaches of Byelaws	241

The accommodation varies from 5 to 319 persons to a house.

On visiting the lodging houses your officer paid special attention to the general condition of the premises, including cleanliness, lighting and ventilation and also to the condition of the bedding. The prevention of overcrowding was strictly enforced and immediate remedial measures taken for the abatement of any nuisance or the repair of any sanitary defect found to exist.

All the houses were limewashed regularly and the bedding cleansed or renewed at intervals.

A number of sanitary defects were discovered for which notices were served on the owners or persons responsible.

SANITARY IMPROVEMENTS.

No. of Lodging Houses in which improvements were carried out.		Nature of Improvements.
13	..	Drains cleansed.
14	..	Roofs repaired.
12	..	Spouting repaired.
5	..	Cisterns repaired.
12	..	Water closets repaired.
4	..	Water pipes repaired.
14	..	Tiles relaid or flooring repaired.
4	..	Skylights repaired.
2	..	Chimneys repaired.
11	..	Windows repaired.
3	..	Waste pipes repaired.
8	..	Plaster of walls and ceilings repaired.
2	..	Ashpits abolished.
10	..	New ashbins provided.
3	..	Trade refuse removed.

RAG FLOCK ACT, 1911.

During the year 1932, 12 visits were made to premises where rag flock was used for making bedding and upholstery, and twelve samples were taken for analysis all of which were found to be below standard. One person was prosecuted and fined £5 and costs and warning letters were sent to the persons from whom the other samples were taken.

SMOKE NUISANCE.

396 observations were made for the detection of black smoke being emitted in such quantities as to be a nuisance.

OFFENSIVE TRADES.

623 visits were made to the premises in which offensive trades were carried on throughout the City, in order to ensure that the Bye-Laws with respect to same were being complied with.

TABLE No. XIII.

LEGAL PROCEEDINGS.

	Summonses.	Orders.	Fines. £	s.	d.
Under Public Health Acts—					
For abatement of nuisances ..	398	47	5	17	6
Disobedience of Justices' Orders ..	20	—	25	3	0
Having in possession the unsound carcase of a pig which was intended for the food of man	1	—	5	0	0
Exposing unsound meat for sale ..	1	—	5	0	0
Failing to remove manure within prescribed period	1	—	2	15	0
Under Dairies, Cowsheds and Milkshops Order	4	—	2	12	6
Under Belfast Corporation Acts ..	46	—	8	0	0
Under Bye-Laws for the decent and seemly conveyance of meat through the public thoroughfares ..	6	—	6	10	0
Under Merchandise Marks Act ..	11	—	5	8	0
Under Bye-Laws prohibiting the sale of meat until after inspection	3	—	2	0	0
Under Housing of the Working Classes Acts	18	—	3	14	0
Under Bye-Laws for the regulation of piggeries	1	—	1	0	0
Under Rag Flock Act	1	—	5	0	0
Under Diseases of Animals Acts— Sheep Scab Order	1	—	5	0	0
Under Sale of Food and Drugs Acts ..	—	—	33	10	0

RAINFALL.

The following Table, kindly supplied by Mr. W. I. Quinn, Secretary to the Belfast City and District Water Commissioners, shows the rainfall in inches during the several months of the year 1932 as recorded at the Water Works at Old Park, compared with the preceding ten years.

TABLE No. XIV.

	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
January ..	4.62	4.84	5.06	3.16	5.09	3.57	7.63	2.29	4.80	4.49	2.96
February ..	3.84	6.39	0.85	4.15	4.80	1.75	4.61	4.23	0.90	3.30	.07
March ..	1.28	2.53	1.36	1.24	1.52	2.65	3.79	0.57	2.03	1.30	1.86
April ..	3.62	3.28	3.15	3.89	1.93	1.26	1.40	1.28	2.01	2.77	3.27
May ..	1.67	1.43	5.12	6.23	2.30	1.43	1.65	2.93	2.02	4.33	2.77
June ..	2.18	0.49	4.32	0.41	1.97	3.91	4.83	3.12	2.35	5.41	1.30
July ..	3.52	1.60	4.42	3.96	3.74	2.93	2.35	3.51	3.34	2.71	5.02
August ..	3.63	7.40	5.71	1.70	3.67	3.10	3.82	5.67	6.41	3.40	2.68
September ..	1.98	4.34	6.93	3.96	2.23	5.42	2.13	0.83	4.51	1.63	3.32
October ..	1.82	5.80	3.00	3.47	3.85	3.66	7.38	4.33	6.03	2.19	3.44
November ..	1.39	4.20	4.17	1.86	4.18	4.84	5.61	5.10	5.39	6.11	1.92
December ..	2.86	5.78	4.83	4.68	1.05	2.91	4.55	7.67	4.24	3.25	5.35
Total ..	32.41	48.08	48.92	38.71	36.33	37.43	49.75	41.53	44.03	40.89	33.96

THE MEAT SUPPLY OF BELFAST.

To go back to the earlier times to recall the conditions under which animals were slaughtered for human food is a retrospect which is better left buried in antiquity—when the spectacle of a beast being slaughtered was one of the local " sights " which occurred in old buildings attached to butchers' shops, where in the majority of cases neither drainage or sanitary conditions existed—a state of affairs often inseparable from cruelty and uncleanliness. It is unnecessary to further consider this unsatisfactory state of affairs which existed prior to the opening of Belfast's first public abattoir ; it is sufficient to say the city fathers realised these deficiencies and in the year 1869 Belfast saw the dawn of a new era as far as meat inspection was concerned when her first public abattoir was built in M'Auley Street, at a cost of £3,230 on the Parisian model which was at that time considered the finest abattoir in Europe. The year 1889 saw further extensions to the abattoir at a cost of £3,000 the accommodation having become so restricted.

The staff of the old abattoir so far did not include a Veterinarian, the onerous duties of meat inspector were in the hands of the lay community ; in 1907 this defect was remedied, and the late Mr. J. Jordan, M.R.C.V.S., took over the duties as Belfast's first City Veterinarian.

There is no doubt the M'Auley Street abattoir served its purpose, but in a town like Belfast which was growing so rapidly, the abattoir soon became out-of-date, the buildings having reached their limit and the march of sanitary science made it imperative that a new abattoir commensurable with the importance of the city should be erected without further delay, and no one realised this more than the late Dr. Henry O'Neill, then chairman of the Markets Committee. He saw public health work, particularly meat inspection, from an angle that made his colleagues often question his judgment, and no scheme under the ægis of the city fathers was subject to more discussion than the doctor's attempt to build a new abattoir, and as a result of his extreme views he found himself bearing the epithet : " Health O'Neill."

In 1913 he saw his effort for further reform bearing good work,and in establishing our present abattoir, Dr. O'Neill wrote history in the annals of the Corporation that will never be forgotten.

It took the Dr. 17 years before he succeeded with his scheme for the new abattoir, it was only a man of his type of determination to see things carried out for the betterment of mankind who could have gained his point as he did.

As an indication of the enormous increase of business at the abattoir it may be stated that the number of animals of all kinds slaughtered during the year 1932 was 164,029, as compared with 1,050 slaughtered in 1870, the year the first public abattoir was opened.

The site of our present abattoir was chosen on account of its close proximity to the markets, sale yards and railway termini. It is designed so that the slaughter of cattle, sheep and pigs is carried out in 3 different departments. The lairages for the different animals are quite convenient to the killing booths, yet the animals cannot see their fellows being slaughtered. The cooling halls are situated quite close to the slaughter halls and all carcases can be easily conveyed there by means of an overhead rail system.

The administrative block contains a veterinarian's office and laboratory, inspectors' office, ticket office and manager's house.

The slaughter halls are a combination of the open hall and booth system and all animals are slaughtered by being first stunned by means of a Cash captive bolt pistol. This apparatus is being replaced by an electric stunner—Electro-lethaler No. 2, for sheep, pigs and calves.

The meat inspection is under the supervision of the City Veterinarian who is supported by 5 officers who hold the meat inspection certificate of the Royal Sanitary Institute. These officials act as detention officers and are always present during the working hours of the abattoir, and inspect every carcase and organs immediately the animal is slaughtered. If they detect any abnormalities they detain the carcase and all the organs which are conveyed to the Detention Dept., where the Veterinarian subjects the carcase to a more thorough examination in order to determine if the disease present is of such a nature or extent as to warrant him in seizing the whole carcase or whether it might be possible for him to pass it after removal of the diseased parts.

This involves a considerable amount of microscopical work in the laboratory attached to the Veterinarian's office. Having a laboratory so attached is a great convenience, as we are in a position to give a rapid diagnosis and not hold up the trade, which would happen if we were forced to send specimens outside for diagnosis in doubtful cases.

All carcases and organs that have been seized are immediately removed to a depot set aside for the purpose where the owner is given an opportunity, if he desires, of further inspection of his property.

The seizures are then taken before the Justices of the Peace under the surveillance of one of the meat inspectors, who in accordance with the provisions of the Public Health Law applies for an order for their destruction. When this order has been granted the condemned carcases and organs are destroyed in the Digesters at the abattoir and the valuable by-products which result sold by tender.

According to the Meat By-laws (section 2) all meat slaughtered outside the city boundary must come to the abattoir between the hours of 8 a.m. and 10 a.m. for inspection. To facilitate the trade a special depot is provided and during the year some thousands of carcases are presented for inspection.

When the meat leaves the abattoir for the shops it is still under supervision. The shops are visited regularly by the food inspectors to see that everything is in perfect order, and it can be said without fear of contradiction that as a result of these methods of inspection—" Individual and Detective " a person might purchase meat from any butcher's shop in the city and feel certain that it was sound.

REPORT

of the City Veterinarian on the Work of his Department for the year 1932.

Dear Dr. Thomson,

I beg to submit my report on the work at the Public Abattoir in connection with the Anti-Mortem and Post-Mortem examinations of the animals slaughtered for human food.

Reference is also made to the work carried out under the Sanitary (Veterinary Inspectors) Order 1909, and to visits made to the Belfast Fever Hospital, Purdysburn, dealing with an outbreak of contagious Pneumonia in Swine.

TABLE 1.

Table showing the number of animals slaughtered and inspected in the Public Abattoir during the year 1932.

1932	Cows	Heifers	Bulls	Bullocks	Calves	Sheep	Lambs	Goats	Pigs
January ..	1892	65	66	1439	109	5193	2820	81	1072
February ..	1704	60	94	1356	67	5167	2213	89	903
March ..	1907	39	146	1435	74	5587	1070	76	884
April ..	1686	50	113	1322	120	5762	1642	115	827
May ..	1625	88	120	1315	43	5975	3949	103	539
June ..	1206	59	77	1101	42	3747	5336	94	321
July ..	1250	68	35	998	78	3191	5478	56	235
August ..	1542	82	23	1345	116	3616	6653	66	193
September ..	1574	76	7	1356	144	4959	5711	74	268
October ..	1769	75	18	1346	166	7776	6209	102	450
November ..	2105	108	33	1500	180	9266	4985	97	510
December ..	1806	91	81	1168	176	7652	3223	88	920
TOTAL ..	20066	861	813	15681	1315	67891	49289	1041	7122

Compared with 1931 : Cattle show a decrease during the year of 1,259 ; Sheep an increase of 25,990 ; Pigs a decrease of 3,310 ; and Goats an increase of 157.

TABLE 2.

Table showing the number of carcases condemned (from all causes) during the year 1932 as being unsound and unfit for human food.

SPECIES.	1932.	1931.
Cows ..	485	568
Heifers ..	7	8
Bulls ..	4	4
Bullocks ..	19	39
Calves ..	46	33
Sheep and Lambs ..	213	192
Goats ..	28	13
Pigs ..	57	142
TOTAL ..	859	999

TABLE 3.

Table showing the carcases seized in the Public Abattoir during the year 1932 and totally destroyed as being unfit for food.

	CATTLE					Sheep Lambs	Goats	Pigs	TOTAL
	Cows	Heifers	Bulls	Bullocks	Calves				
Anaemia ..	1	..	1	..	..	1	..	.	3
Decomposed ..	..	..	..	..	..	17	..	2	19
Dropsical ..	2		..	..	..	124	25	5	156
Emaciated ..	25	..	1	..	2	14	2	1	45
Enteritis ..	..	..	..	..	8	2	..	..	10
Fevered ..	30	1	..	3	8	18	1	16	77
Hydatids ..	1	..	..	..	..	..	..	..	1
Inflammation ..	..	..	..	..	10	2	..	..	12
Injured ..	9	..	..	1	1	10	..	..	21
Jaundice ..	1	..	..	..	2	..	..	..	2
Joint Ill ..	..	..	..	..	5	..	..	..	5
Neoplasms (Cancer Sarcoma). ..	22	..	..	..	..	4	..	..	26
Osteomyelitis ..	1	..	..	..	..	..	..	..	1
Septic Nephritis ..	1	..	..	..	..	1	..	..	2
Peritonitis and Pleurisy ..	..	..	..	1	..	2	..	5	8
Pericarditis ..	1	..	..	..	..	1	..	..	2
Piroplasmosis ..	1	..	..	..	..	..	..	..	1
Pyaemia ..	..	..	..	..	1	1	..	..	2
Pseudo Leukaemia	..	..	..	..	..	2	..	..	2
Rheumatism ..	1	..	1	..	..	..	..	..	2
Septicaemia ..	16	..	..	3	6	13	..	2	40
Septic Mastits ..	1	..	..	..	..	..	..	..	1
Septic Metritis ..	7	1	..	..	1	1	..	..	8
Septic Pneumonia	1	..	..	..	1	1	..	..	3
Swine Fever ..	..	..	..	..	..	..	..	1	1
Tuberculosis ..	354	5	1	11	1	..	..	25	397
Uremia ..	1	..	..	..	..	..	..	..	1
White Scour ..	..	..	..	..	1	..	..	..	1
TOTAL ..	485	7	4	19	46	213	28	57	859

In addition to the above summary there were 102 cwt., 1 qr., 8 lb. of Beef, 1 cwt. 2 qrs. 25 lbs. of Mutton, 2 cwt. and 6 lbs. of Pork, and 1 qr. 4 lbs. of Veal seized as being unsound and unfit for human food.

TABLE 4.

Table showing comparison between Tuberculosis and other Diseases as causes of condemnation of carcases of animals slaughtered at the Public Abattoir during the year 1932.

TUBERCULOSIS.

	CATTLE			Sheep and Lambs	Goats	Pigs	Total
	Cows	Other Cattle	Calves				
Total Seizure	354	17	1	..	..	25	397
Partial Seizure	38	6	..	..	..	..	44
Total and Partial	392	23	1	..	..	25	441

OTHER DISEASED CONDITIONS.

	CATTLE			Sheep and Lambs	Goats	Pigs	Total
	Cows	Other Cattle	Calves				
Total Seizure ..	131	13	45	213	28	32	462
Partial Seizure ..	26	8	3	23	..	6	66
Total and Partial ..	157	21	48	236	28	38	528

It will be seen from the above tables that Tuberculosis in cattle is a most fruitful source of seizure, accounting for almost 64% of the seizures, as compared with other diseased conditions.

Some indication of the losses from Tuberculosis borne annually by the meat trade may be obtained from the above figures which represent a cash value of at least £4,000 or roughly £75 per week.

TABLE 5.

Table showing the percentage by age of the animals slaughtered and condemned for Tuberculosis.

SPECIES.	BY AGE.							
	From One Month to one Year.	Per Cent.	One to Three Years.	Per Cent.	From Three to Six Years.	Per Cent.	Over Six Years.	Per Cent.
Cows ..	..	..	..	..	..	..	354	100
Heifers ..	..	..	4	80	1	20	..	..
Bullocks ..	..	..	4	36.36	7	63.64	..	..
Bulls ..	..	..	1	100	..	..	..	..
Pigs ..	25	100	..	..	..	..	..	..
Calves ..	1	100	..	..	..	..	..	..

TABLE 6.

Table showing the percentage by condition of the animals slaughtered and condemned for Tuberculosis.

SPECIES.	BY CONDITION.							
	GOOD		FAIR		INDIFFERENT		POOR	
	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.
Cows ..	7	1.97	175	49.43	162	45.76	10	2.82
Heifers ..	1	20	4	80	..	..	..	..
Bulls ..	1	100	..	..	..	..	..	..
Bullocks ..	2	18.18	9	81.72	..	..	..	..
Calves ..	..	..	1	100	..	..	..	..
Pigs ..	25	100	..	..	..	..	..	..

TABLE 7.

Table showing the number of Diseased Organs seized and destroyed as being unsound and unfit for human food during the year 1932. (The figures of the preceding year are given for comparison.

	1932	1931	INCREASE.	DECREASE
BEEF :—				
Heads	186	140	46	..
Tongues	186	143	43	..
Hearts	157	92	65	..
Lungs	3,354	4,462	..	1,288
Livers	11,224	11,885	..	661
Stomachs	209	144	65	..
Udders	1,983	2,161	..	178
Mesenteries	401	..	..	..
Omentum	198	..	..	..
Diaphragm	24	..	..	..
Kidneys	246	404	..	158
MUTTON :—				
Hearts	1	3	..	2
Lungs	200	153	47	..
Liver	10,825	7,368	3,457	..
Kidneys	8	..	8	..
PORK :—				
Heads	72	45	27	..
Tongues	73	45	28	..
Hearts	49	55	..	6
Lungs ..	57	116	..	59
Liver	93	174	..	81
Mesenteries	4	28	..	24
Kidneys	9	3	6	..
GOAT :—				
Livers	..	49	..	49
Kidneys	6	..	6	..

The above does not include the viscera of animals totally destroyed.

TABLE 8.

Table showing percentage incidence of Generalized Tuberculosis in animals slaughtered at the Public Abattoir during the year 1932.

	1932	1931
Cows	1.76	1.32
Other Cattle ..	.09	.21
Cattle (all classes) ..	.99	1.05
Calves	.007	.11
Pigs	.03	.02

INSPECTION OF MEAT PREPARED OUTSIDE THE CITY BOUNDARY.

According to Section (2) Sale of Meat By-Laws, every person bringing any meat within the City for sale, shall bring such meat to the Public Abattoir, Stewart Street, and there submit same for inspection between the hours of 8 a.m. and 10 a.m.

The following tables show the amount of meat, offal, etc., dealt with in accordance with the above regulations.

(A).—Table showing amount Examined.

	BEEF	MUTTON	PORK	VEAL	GOAT	RABBITS
Sides	1,728	..	..	..	..	..
Quarters	13	..	..	..	..	..
Cuts	2,516	387	..	..	..	..
Carcases	..	4,049	162	3	..	4
Heads	862	442	..	..	..	..
Tongues	834	..	..	..	..	..
Hearts	788	4,079	..	..	..	..
Lungs	725	3,981	..	..	..	..
Livers	868	3,987	6	..	..	..
Mesenteries	783	..	..	..	..	..
Kidneys	14	..				
Tails	784	..	..	..	..	..
Diaphragm	849	..	..	..	..	..
Udders	28	..	..	..	..	..

(B).—Table showing amount Seized.

	BEEF	MUTTON	PORK	VEAL	GOAT
Sides	10	..	..	..	..
Quarters	5	..	..	..	..
Cuts	4 & 160 lbs.	3	13 lbs.	..	..
Carcases	..	3	12	..	..
Heads	24	..	..	..	..
Tongues	22	..	..	..	..
Hearts	12	16	..	..	..
Lungs	61	16	..	..	..
Liver	228	480	5	..	..
Tails	7	..	..	..	..
Diaphragm	9	..	..	..	..
Udders	8	..	..	..	..
Mesenteries	17	..	..	..	..

INSPECTION OF PORK IN THE MARKET.

The following table shows the number of carcases of Pork inspected and results.

NUMBER EXAMINED	TOTAL SEIZURES	PARTIAL SEIZURES	CAUSE OF SEIZURE
59	..	4 Heads and Tongues	Tuberculosis

PURDYSBURN FEVER HOSPITAL.

During the year we had an outbreak of Pneumonia in the pigs kept at the Fever Hospital. From the lungs of one of the pigs on post-mortem I isolated an organism of the bi-polar type.

Owing to the possibility of the infection spreading and considering the condition of the pigs I advised slaughter of the remaining pigs. This was carried out, and so far there has been no recurrence of the epidemic.

VISITS TO PORK STORES.

At the request of the Chief Sanitary Officer I visited Pork Stores on four different occasions and seized five carcases of pork as being unsound and unfit for human food.

HANDLING AND TRANSPORT OF FOOD.

During the year it has been necessary, on several occasions, to reprimand butchers, carting contractors, and others in regard to the conditions observed by them whilst carting meat through the city. Frequently the meat has been insufficiently covered to afford adequate protection and still more frequently the cleanliness of the sheets used for protection purposes leaves a lot to be desired.

Perhaps the day is not far distant when all meat, offal, etc., will be delivered to the shops in covered waggons.

INSPECTION OF COWSHEDS AND DAIRY COWS.

The approximate number of Milch cows within the city boundary is 1,260, and the total number of cowsheds on the register is 88.

During the year I have made a systematic inspection of all the Milch cows and cowsheds, and as a result of the inspection 12 cows were reported under the Bovine Tuberculosis Order (1925). These were dealt with by the officer carrying out the order and have been reported in detail in previous reports.

Repeated bacteriological examinations of milk from cows showing any udder lesion were carried out. In the majority of cases dealt with Streptococcus mastitidus was the causal organism. As this organism although non-pathogenic to man gives the milk an altered appearance and renders it quite unsuitable for human food, the owners in every case were ordered not to use such milk for human consumption.

The cowsheds have been carefully inspected, paying attention to lighting, ventilation, drainage and water supply.

In only one instance was it necessary to order the owner to cleanse his cowshed.

One application was received from a Dairyman to commence keeping cows within the city boundary for the sale of new milk. This applicant having complied with the various regulations, his name was added to the register.

The number of Grade A. herds is still steadily increasing, but unfortunately the most of our milk supply for the city is produced in rural areas outside our jurisdiction and is not of that standard.

To my colleague, Dr. Tinsdale, I am again deeply grateful for the considerable amount of laboratory work which he so kindly undertook in connection with the examination of milk specimens, etc.

To my staff for their loyal support and manner in which they carried out their onerous duties at all times I say thanks.

In concluding the foregoing summary of the year's work, I again, Sir, wish to acknowledge the many kindnesses you have shown me during the year and to thank you for the personal interest you have taken in my department.

Yours faithfully,

ALEX. McLEAN,

City Veterinarian.

MILK SUPPLY.

Milkshops—

On Register 1st January	1,536
New Registrations effected during the year	317
Removed from Register during the year	158
Number of Visits made during the year	3,515
Number of requests for registration refused	6
*Number of unregistered persons discovered selling milk	103
Number of new safes provided by vendors for the storage, etc., of milk	171
Verbal notices given	180

*In the majority of instances where unregistered persons were found selling milk, ignorance of the law was pleaded. If the premises were suitable the offenders had their names placed on the register and if unsuitable they immediately ceased selling milk.

During the year 225 samples of milk were taken and submitted to the City Bacteriologist for examination.

Return shewing the number of Milkshops and the Inspections made in each of the several Dispensary Districts.

Dispensary Districts	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
Purveyors	66	197	214	150	85	132	5	18	106	129	175	139	84	..	120	75	1695
Inspections	214	502	618	239	165	197	..	17	215	320	318	217	134	..	237	124	3515

Cowsheds—

On Register	88
Number of Cows	1,260
Number of inspections made	356

All Cowsheds were limewashed at least twice during the year.

Return shewing the number of Cowsheds and the number of inspections made in each of the several Dispensary Districts.

Dispensary District	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
Cowsheds	..	2	2	8	1	7	2	21	18	4	6	4	8	2	2	1	88
Inspections		11	3	29	2	47	8	88	78	8	29	11	25	..	17	..	356

SALE OF FOOD AND DRUGS ACTS.

Return showing particulars of samples of food etc. taken for analysis during the year.

TABLE XV.

Nature of Sample.	Samples taken.	Adulterations.	Prosecutions.	Convictions.	Discharged on payment of costs.	Dismissals.	Fines.
Aerated Water	2	..	..	..	..	..	..
Almonds	2	..	..	..	..	..	..
Arrowroot	1	..	..	..	..	..	..
Aspirin Tablets	1	..	..	..	..	..	..
Baking Powder	13	..	..	..	..	..	..
Barley	8	..	..	..	..	..	..
Beer	2	..	..	..	..	..	..
Bisto	1	..	..	..	..	..	..
Brawn	1	..	..	..	..	..	..
Butter	147	6	6	6	..	..	9 0 0
Butter (informal)	8	3	..	..	..	..	..
Buttermilk	272	20	9	9	..	..	11 5 0
Buttermilk (informal) ..	7	3	..	..	..	..	..
Cake and Sponge Cake ..	9	1	..	..	..	..	..
Castor Oil (informal) ..	1	1	..	..	..	..	..
Cheese	19	..	..	..	..	..	..
Cinnamon	1	..	..	..	..	..	..
Citrate of Magnesia ..	3	..	..	..	..	..	..
Cocoa	7	..	..	..	..	..	..
Cod Liver Oil	1	..	..	..	..	..	..
Coffee	2	..	..	..	..	..	..
Coffee and Chicory ..	4	..	..	..	..	..	..
Condensed Milk	14	..	..	..	..	..	..
Confectionery	10	..	..	..	..	..	..
Confectionery (informal) ..	1	..	..	..	..	..	..
Cooking Fat	1	..	..	..	..	..	..
Cordial	1	..	..	..	..	..	..
Corned Beef	1	..	..	..	..	..	..
Corn Flour	6	..	..	..	..	..	..
Cream	4	..	..	..	..	..	..
Cream of Tartar	9	..	..	..	..	..	..
Currants, Raisins, Etc. ..	26	..	..	..	..	..	..
Custard Powder	11	..	..	..	..	..	..
Custard Pudding (mixture) ..	1	..	..	..	..	..	..
Dried Milk (informal) ..	21	..	..	..	..	..	..
Dripping	41	..	..	..	..	..	..
Egg Substitute Powder ..	1	..	..	..	..	..	..
Epsom Salts	1	..	..	..	..	..	..
Farola	2	..	..	..	..	..	..
Flour (cake)	1	..	..	..	..	..	..
Flour (self-raising) ..	1	..	..	..	..	..	..
Fruit Pectin	1	..	..	..	..	..	..
Gin	2	..	..	..	..	..	..
Glauber Salts	1	..	..	..	..	..	..
Ground Ginger	2	..	..	..	..	..	..
Ginger	1	..	..	..	..	..	..
Herb Beer	1	..	..	..	..	..	..
Honey	1	..	..	..	..	..	..
Ice Cream	12	..	..	..	..	..	..
Jam	16	1	1	..	..	1	..
Lard	36	..	..	..	..	..	..
Lemonade	1	..	..	..	..	..	..
Lemonade Crystals ..	1	..	..	..	..	..	..
Lentils	1	..	..	..	..	..	..
Lime Juice Cordial ..	1	..	..	..	..	..	..
Liquid Frozen Eggs (informal)	1	..	..	..	..	..	..
Malted Milk with Cocoa ..	2	..	..	..	..	..	..
Margarine	29	..	..	..	..	..	..
Mince Meat	1	1	..	..	..	..	..

TABLE XV. (Continued).

Nature of Sample.	Samples taken.	Adulterations.	Prosecutions.	Convictions.	Discharged on payment of costs.	Dismissals.	Fines.
Mustard	6	..	..	..	..	..	..
Mustard (compound) ..	1	..	..	..	..	..	..
Olive Oil	2	..	..	..	..	..	..
Orange Crystals	1	..	..	..	..	..	..
Peas	2	..	..	..	..	..	..
Pepper	9	..	..	..	..	..	..
Pepper (informal)	2	..	..	..	..	..	..
Pickles	1	..	..	..	..	..	..
Raisins Glace, Cherries, Etc. ..	5	..	..	..	..	..	..
Rice	4	..	..	..	..	..	..
Rum	4	1	..	..	..	..	..
Sauce and Relish	12	..	..	..	..	..	..
Sausages and Sausage Roll ..	25	3	..	.		..	..
Seidlitz Powders	1	..	..	..	..	..	..
Semolina	3	..	..	..	..	..	..
Spice (mixed)	1	..	..	..	..	..	..
Sponge Mixture	1	..	..	..	..	..	..
Sweetmilk	1,267	51	19	16	3	..	16 5 0
Sweetmilk (informal) ..	34	4	..	..	..	..	..
Sweetmilk (informal for extraneous dirt) ..	162	..	..	..	..	..	..
Syrup, Golden	3	..	..	..	..	..	..
Tea	23	..	..	..	..	..	..
Tincture of Iodine.. ..	1	..	..	..	..	..	..
Tinned Fish (informal) ..	4	..	..	..	..	..	..
Tinned Fruit (informal) ..	6	..			..	..	..
Tinned Meat (informal) ..	4	..	..	.	.		
Tomatoes (informal) ..	1	..	..	..	..	..	..
Treacle	1	..	..	..	..	..	..
Trifle Mixture (informal) ..	1	..	..	..	..	..	..
Vinegar	12	..	.	..	..	..	..
Whiskey	7	..	..	..	..	..	..
Wine	6	..	..	..	..	..	..
TOTAL ..	2,387	95	35	31	3	1	36 10 0

From above table it will be seen that although 95 samples of Food etc. were found to be adulterated or not up to standard only 35 prosecutions were instituted. This is accounted for as follows :—

In 11 samples of Buttermilk, 1 of Rum, 1 of Sponge Cake, 1 of Mince Meat, 3 of Sausages and 32 of Sweetmilk the percentage below standard in each case was so small no proceedings were taken, but vendors were cautioned.

3 samples of Butter, 3 of Buttermilk, 4 of Sweetmilk and 1 of Castor Oil, were informal.

TABLE XVI.

Return showing particulars of samples of sweetmilk taken for analysis during the year.

Month.	Samples taken.	Average percentage.		Highest percentage of Fats with the percentage of solids (not Fats).		Highest percentage of solids (not Fats) with the percentage of Fats.		Lowest per centage of fats with the percentage of solids (not Fats).		Lowest percentage of solids (not Fats) with the percentage of Fats.	
		Fats	Solids not Fats.	Fats.	Solids not Fats.	Solids not Fats.	Fats.	Fats.	Solids not Fats.	Solids not Fats.	Fats.
January	120	3.63	8.82	5.50	8.72	9.38	4.30	2.80	8.56	7.35	3.50
February	122	3.66	8.85	5.50	8.94	9.38	3.30	2.70	8.54	7.24	3.50
March	117	3.72	8.91	8.80	8.77	9.62	3.90	2.55	8.42	8.26	3.70
April	112	3.56	8.83	5.00	8.92	9.28	3.30	2.70	8.72	7.90	3.90
May	108	3.65	8.82	10.00	8.99	9.45	2.70	2.20	5.76	5.76	2.20
June	129	3.31	8.80	5.80	9.08	9.30	3.15	2.35	8.69	7.94	3.00
July	87	3.25	8.68	4.80	8.72	9.14	4.10	2.50	8.56	7.80	3.20
August	101	3.50	8.71	4.90	8.84	9.23	3.70	2.20	8.88	7.81	3.10
September	97	3.60	8.80	5.00	8.62	9.38	3.40	2.85	8.11	7.92	3.00
October	101	3.80	8.82	5.20	9.19	9.28	4.40	3.00	8.67	8.07	3.90
November	102	3.88	8.86	5.10	8.78	9.25	3.90	2.78	8.44	8.30	3.40
December	105	3.74	8.90	6.10	9.08	9.54	6.00	2.80	8.16	8.16	2.80

Return showing shops, etc., visited during the year 1932.

Description of Shops, Etc.	No. of Visits.
Butchers' Shops	3,451
Confectionery Shops	302
Dairies	146
Fish Shops	221
Fish and Chip Shops	275
Fruit Shops	1,073
Grocery Shops	2,987
Ice Cream Shops	2,515
Markets	228
Provision Shops	933
Restaurants	20
Railway Stations	274
Meat Factories	137
Cold Stores	38
Hawkers' Carts, Etc	1,189
	13,789

Structural alterations were carried out to 60 Butchers' Shops in order to comply with the Bye-Laws with respect thereto.

SEIZURES.

12 Carcases of Pigs.
1 Cwt. and 28 lbs. of Pork.
27 lbs. of Ham.
17 Rabbits.
85 Boxes of Fish.
34 Cases of Condensed Milk.
33 of Lettuce.
14 Boxes of Pears.

THE MUNICIPAL ABATTOIR.

To CHARLES S. THOMSON, ESQ., M.D., D.P.H., ETC.,
Medical Superintendent Officer of Health.

Dear Sir,
I have pleasure in submitting my annual report for the year 1932.

The Abattoir is situated in Stewart Street and covers an area of 3¼ acres. It is within easy access of the Cattle Market, Oxford Street, and Sale Yards, all of which are in the immediate vicinity, thus it will be seen that the Markets Committee, in their foresight, were fully justified in erecting the establishment in a central position as much time is thereby saved by the Butchers, owing to the fact that an animal for slaughter can be driven from the Markets and Auction Marts to the Abattoir inside five minutes. A special entrance from the Markets under one of the Archways of the Albert Bridge has also been provided by the Committee and is largely availed of by the Butchers on Mondays and Tuesdays of each week, the former day for transit of sheep and the latter for cattle. This arrangement, from a traffic point of view, is an excellent one, and greatly relieves congestion in the surrounding streets.

The present building is comparatively new, thoroughly up-to-date, and contains all the equipment, electrical and otherwise, necessary to carry on a modern Abattoir.

I append particulars of the Abattoir Buildings, &c., also the present Staff and their duties.

Buildings, Etc.

1. THE ADMINISTRATIVE BLOCK contains Resident Foreman's Apartments in second storey, Veterinarian's Office, Laboratory, General Office and Toll Collector's Office, also Meat Inspectors' Rest Room, on Ground Floor, all with complete telephonic communication and necessary equipment.

2. MESS ROOM for use of Butchers prior to commencing their work.

3. LIVE SHEEP LAIRAGE BUILDING capable of accommodating 1,200 Sheep.

4. SHEEP KILLING HALL capable of providing accommodation for the slaughter of from 500 to 700 animals per day.

5. SHEEP HANGING HALL capable of storing upwards of 700 carcases of Mutton.

6. LIVE PIG LAIRAGE BUILDING capable of accommodating 100 Pigs.

7. PIG KILLING AND HANGING HALL fitted up with the most modern appliances (including Special Hot Water Tanks for scalding purposes) with accommodation for 250 carcases.

8. LIVE CATTLE LAIRAGE (220 ft. long x 48 ft. wide) capable of accommodating 250 Head of Cattle.

9. CATTLE KILLING PENS (20) (each 10½ft. long x 14 ft. wide).

10. CENTRAL CATTLE DRESSING HALL (220 ft. long x 40 ft. wide).

11. MEAT HANGING HALL (166 ft. long x 48 ft. wide) capable of storing 500 carcases of Beef, and fitted up with special overhead Twin Bar Trolleys for removing same.

12. Refrigerator and Chill Rooms capable of storing 150 carcases of Beef, 300 carcases of Mutton and 100 carcases of Pork per day.

13. Boiler House.

14. Engine House.

15. Condemned Meat Store.

16. Digester Plant Building.

17. Tripe Dressing Stores (2).

18. Gut Dressing Stores (3).

19. Butchers' Lockers.

20. Weighing Machines (various).

21. Electric Clocks (complete installation).

Staff (Markets Commitee).

1 Manager.

1 Resident Foreman.

1 Toll Clerk.

1 General Clerk.

1 Engineer.

1 Machineman.

6

1 Charwoman.
3 Checkers.
8 Porters (Cleaning Floors, etc.).
1 Constable.
1 Mechanic.
1 Weighmaster.
1 Night Watchman.
1 Fireman.
1 Digester Plant Operator.
1 Assistant Digester Plant Operator.
1 Refrigerator Operator.

20

Total Staff .. 26.

Humane Killers.

The use of the " Humane Killer " in connection with the slaughter of Cattle, Sheep, Calves and Goats is compulsory, in accordance with provisions of a Bye-Law which was put into operation in March 1930. There are 36 Humane Killers is use which are highly satisfactory, no accident or injury of any sort having occurred to man or beast during the past year.

The " Humane Killer " has not been found suitable in connection with Pig Slaughter but a new instrument, known as " Electrolethaler," which stuns the animal by electricity has been brought to the notice of the Markets Committee by the City Veterinarian with a view to its adoption or otherwise. The apparatus is at present installed in several English and Continental Abattoirs with satisfactory results.

Clean Water Supply.

The special installation of " self-filling " Cattle drinking troughs installed some time ago has been found most satisfactory and serviceable, also a great boon to the animals whilst resting overnight in the Lairages previous to slaughter. In addition it is most economical as regards water consumption, notwithstanding the fact that a plentiful supply is always available in each section.

Cold Storage Chambers.

The Cold Storage Chambers, which normally open on 1st May and close on 31st October, were largely availed of by the Fleshers, especially during July and August and, owing to the Spring-like weather which prevailed during the Christmas Season were again put in commission at that period to meet requirements. This innovation turned out quite successful, being well patronised also much appreciated by the Trade.

During the year the following quantities of Meat were placed in Cold Storage for various short periods :—

2,597	Sides of Beef.
3,021	Carcases of Mutton.
437	Carcases of Pork.
51	Carcases of Veal.
2,140	Miscellaneous portions of Beef, Mutton, etc.

Humane Killers and Electrolethaler.

The Humane Killers of which 33 are at present in use have worked very satisfactorily, no accidents of any kind having occurred during the year, due no doubt to the fact that the City Butchers, apart from being highly expert at their work, have also become very proficient in the use of the instruments.

The Markets Committee, in order to keep the establishment thoroughly up-to-date, are, however, about to instal the latest type of " Humane Killer," known as the " Electrolethaler," which stuns by Electricity the animal before being bled. It is at present in use in several Abattoirs, etc., in England and Scotland and has been found a great success. When introduced locally it will be safe, economical and easy to operate, and, I believe, a great advance on the present Humane Killer although the best of its kind on the Market and quite satisfactory for a limited number of animals that might be slaughtered in small provincial Abattoirs, or private Slaughter Houses, nevertheless, rather expensive for large establishments slaughtering over 160,000 animals yearly.

Licensed Butchers.

In accordance with requirements of Bye-Law, there were 119 Licences issued during the year to competent persons and included 2 under authority of the local Rabbi, in connection with the Jewish ritual form of slaughter.

The following return shows the number of animals slaughtered in the Abattoir during the Year ended 31st December, 1932 :—

Cattle	37,421
Calves	1,315
Sheep and Lambs ..	117,180
Goats	1,041
Pigs	7,122
Total	164,079

I may here mention that before removal all Meat is subject to a close inspection by the Public Health Officials who detain anything of an unsound or diseased nature.

Equipment.

During the year the Machinery and Overhead Equipment has been kept in a good state of preservation.

The Cattle Lairages, Sheep Lairages, Pig Lairages, also the various Slaughter Pens throughout the Premises, have been kept systematically cleansed with a plentiful supply of water and where permissable disinfectants have been freely applied to keep the Buildings in a thoroughly clean and sanitary condition.

(Signed),

GEORGE A. KINNING,
Superintendent of Markets,
and Manager of the Abattoir

Markets and Abattoir Department,
Belfast.

30th January, 1933.

BOVINE TUBERCULOSIS (N.I.) ORDER, 1926.

Under the Bovine Tuberculosis (N.I.) Order, 1926, which takes the place of the Bovine Tuberculosis (Ireland) Order, 1914, it is the duty of Local Authorities to examine all bovine animals suffering from Tuberculosis in certain specified forms.

The Order requires every person having in his possession or under his charge

(a) A cow which is, or appears to be, suffering from tuberculosis of the udder, indurated udder or other chronic disease of the udder ; or

(b) Any bovine animal which is, or appears to be, suffering from tuberculous emaciation ; or

(c) Any bovine animal which is suffering from a chronic cough and showing definite clinical signs of tuberculosis,

to give information of the fact to a Constable of the Police Force for the area wherein the animal is, and the Constable in turn must transmit the information to the Local Authority and to the Department of Agriculture.

As soon as the information has been received by the local authority the animal is examined by their Veterinary Inspector who furnishes the local authority with the report of such examination. If the Inspector's report shows that the animal is suffering from the disease it is the duty of the local authority to notify the owner that it is their intention to slaughter the animal unless he (the owner) objects, notice of which must be given by him in writing to the local authority. If the owner objects the local authority cannot carry out the slaughter until authorised by the Department of Agriculture.

When an animal has been slaughtered a post-mortem examination is carried out by the Veterinary Inspector and a certificate of the result of the post-mortem made out by the Veterinary Inspector.

Prior to slaughter a valuation is fixed by the Veterinary Inspector which must be agreed to by the owner. If the certificate of the post-mortem examination shows that the animal was not suffering, the owner is entitled to an amount represented by the full valuation plus a further sum of 20/- as compensation ; if the certificate shows that the animal was suffering from tuberculosis (not being advanced tuberculosis) then the owner receives as compensation an amount equal to three-fourths of the valuation agreed upon, and if the certificate reveals advanced tuberculosis one-fourth of the valuation is paid to the owner.

Owners of suspected animals brought into the City from outside areas have the option of (a) returning them to the districts from which they were brought ; or (b) sending them to the slaughter house or other suitable premises in the district for examination.

During the year 1932, 77 animals were reported as suspicious, which necessitated the examination of 393. Of these 18 were slaughtered and post-mortem examinations carried out, and the remainder were found not suffering on clinical examination. Of the animals slaughtered, 1 was found to be suffering from tuberculosis of the udder, 3 were giving tuberculous milk and 14 were affected with other forms of tuberculosis. The total amount of compensation paid to the owners was £59 18s. 0d.

REPORT OF PROCEEDINGS UNDER THE CONTAGIOUS DISEASES ANIMALS ACTS FOR THE YEAR 1932.

The following is a list of the scheduled diseases :—Cattle Plague, Foot and Mouth Disease, Pleura-Pneumonia, Rabies, Glanders, Farcy, Epizootic Lymphangitis, Sheep Pox, Anthrax, Sheep Scab, Contagious Abortion, and Tuberculosis, this latter in certain defined forms.

FOOT AND MOUTH DISEASE.

No cases were reported during the year under review.

EQUINE DISEASES.

No cases of scheduled disease of Equines was observed or reported in the County Borough during the year.

SHEEP SCAB.

Two outbreaks of Sheep Scab were discovered in the Belfast Saleyards and seven outbreaks were at the Belfast Export Stockyard.

The usual precautionary measures were adopted in connection therewith and steps of a preventative and curative nature taken.

SWINE FEVER.

Of the fourteen suspected outbreaks of Swine Fever reported two were confirmed. These were dealt with by the Central Authority.

For some years past the Ministry of Agriculture has dealt directly with outbreaks of Swine Fever, the procedure being to slaughter all diseased and in-contact Pigs, and restrict the movement of animals which may have been exposed to infection.

All infected premises are efficiently cleansed and disinfected and a defined period allowed to elapse before re-stocking is permitted.

BOVINE TUBERCULOSIS.

Eighteen outbreaks of Bovine Tuberculosis as defined by the Bovine Tuberculosis (N.I.) Order of 1926, were dealt with. Fourteen of these were reported by owners of dairy herds in the City, one was found exposed for sale at the Saleyards and three were detained at the Export Stockyards.

Of the cases reported by City owners nine were found to be " advanced " and five " not advanced" cases of Tuberculosis.

The case found in the Saleyards was classified as " advanced," and of the animals detained at the Port, three were placed in the " not advanced " category.

The classification is made as a result of Post-Mortem examination in each case and is in accordance with the directions embodied in the Bovine Tuberculosis (N.I.) Order of 1926.

In addition to the above a number of suspected animals were subjected to critical examination and found to be " not affected " within the meaning of the Order.

These examinations in most cases entail the microscopical examination of Udder secretions, and in some cases the application of the Tuberculin Test.

Five samples of milk taken by officials of the City Council, which were subjected to examination and biological investigation by the City Bacteriologist were found to contain tubercle bacilli.

The dairy herds on the farms at which those milk samples were produced were subjected to critical examination with the result that diseased animals were found and subsequently removed for slaughter under the provisions of the Bovine Tuberculosis (N.I.) Order of 1926.

INSPECTION OF SALEYARDS AND LAIRAGES.

The Saleyards of which there are three, each holding weekly auctions for cattle, sheep and swine, were constantly visited and the stock exposed subjected to general observation.

Cleansing and disinfection of those yards and lairages of private owners were efficiently carried out.

Railway termini were visited from time to time and found at all times to have been kept in a satisfactory manner.

MOTOR TRANSPORT.

On the 1st June, 1932, the Transit of Animals (Northern Ireland) Order of 1932, came into operation, but Article 4 of this Order does not come into operation until the 1st April, 1933. This Article deals with the construction of motor vehicles.

Regarding the cleansing of motor vehicles, the Ministry of Agriculture has been in negotiation with the Belfast Corporation for some time with regard to the provision of proper facilities for the cleansing of floats after loads are discharged at the various Saleyards. These negotiations have been successful and it is hoped to have a proper cleansing place in the City very soon.

J. EWING JOHNSTON,
M.B.E., M.R.C.V.S.

INFECTIOUS DISEASES.

SCARLET FEVER.

1,302 notifications of Scarlet Fever were received during the year, but on investigation 45 were found not suffering from the disease. In addition to those notified 5 cases notified as Diphtheria were found to be suffering from Scarlet Fever, which made the total number that occurred during the year 1,262 ; an attack rate of 3.0 per 1,000 of the population.

The number of cases which occurred during the preceding year was 1,143, and the average number notified annually during the ten years 1922-1931 was 1,212.

The disease continued to be of a mild type, only 10 deaths being registered during the year under review, equivalent to the low case mortality rate of 0.79 per cent. or a death rate of 0.02 per 1.000 of the population. The number of deaths registered during the preceding year was 13 and the average number registered annually during the 10 years 1922-1931 was 21.

DIPHTHERIA.

425 cases were notified but on investigation 64 were found not suffering from the disease ; this made the total number of cases that occurred during the year 361, an attack rate of 0.87 per 1,000 of the population.

The number of cases that occurred during the preceding year was 492, and the average number notified annually during the 10 years 1922-1931 was 488. 19 deaths were registered, equivalent to a case mortality rate of 5.3 per cent., or a death rate of 0.05 per 1,000 of the population. The number of deaths registered during the preceding year was 13, and the average number registered annually during the 10 years 1922-1931 was 27.

The procedure adopted in former years of allowing " contact " children to return to school in 2 days if their throat swabs were found " negative " has been continued. This arrangement has given entire satisfaction. It is claimed that by adopting such a procedure much valuable school time is saved and the early detection of a secondary infected child or a diphtheria " carrier " is more easily accomplished.

TYPHOID FEVER.

33 cases were notified, 4 of which were found on investigation not suffering from the disease, which made the actual number of cases that occurred in the city 29, an attack rate of 0.07 per 1,000 of the population.

The number of cases which occurred during the preceding year was 47, and the average number notified annually during the 10 years 1922-1931 was 91.

1 death was registered, equivalent to a case mortality rate of 3.4 per cent. or a death rate of 0.002 per 1,000 of the population.

The number of deaths registered during the preceding year was 1, and the average number registered annually during the 10 years 1922-1931, was 7.

TABLE NO. XVII.

Shewing the annual death rate per 1,000 of the population from Typhoid Fever during the 20 years 1913-1932, also the average rate for quinquennial periods.

Year	Rate		Year	Rate	
1913	0.05	0.06	1923	0.01	0.02
1914	0.07		1924	0.007	
1915	0.02		1925	0.04	
1916	0.05		1926	0.01	
1917	0.10		1927	0.02	
1918	0.06	0.05	1928	0.03	0.01
1919	0.04		1929	0.01	
1920	0.08		1930	0.005	
1921	0.04		1931	0.002	
1922	0.02		1932	0.002	

Average annual death rate for twenty years 1913-1932, 0.033.

ERYSIPELAS.

126 cases were notified during the year, an attack rate of 0.3 per 1,000 of the population.

The number which occurred in the preceding year was 110, and the average number notified annually during the 10 years 1922-1931, was 89.

CEREBRO-SPINAL FEVER.

9 cases were notified during the year, an attack rate of 0.02 per 1,000 of the population.

MEASLES AND WHOOPING COUGH.

Measles and Whooping Cough were made notifiable from 1st December, 1932, under the Public Health (Notification of Measles and Whooping Cough) Northern Ireland Regulations, 1932. During the month of December 551 cases of measles and 197 cases of whooping cough were notified.

During the year the number of deaths caused by measles was 30, equivalent to a death rate of 0.07 per 1,000 of the population. In the preceding year 133 deaths were registered as having been caused by measles and the average number registered annually during the ten years 1922-1931 was 93. 102 deaths were caused by whooping cough equivalent to a death rate of 0.25 per 1,000 of the population. The number registered during the preceding year was 32, and the average number registered annually during the ten years 1922-1931 was 83.

DIARRHŒA.

151 deaths were registered as having been caused by this disease during the year, equivalent to a death rate of 0.36 per 1,000 of the population.

The number registered during the preceding year was 100, and the average number registered annually during the 10 years 1922-1931, was 172.

PUERPERAL FEVER.

6 cases of this disease were notified. The number of cases notified during the preceding year was 15, and the average number notified annually during the 10 years 1922-1931, was 17.

Table XVIII.

Shewing the rate per 1,000 of the population of cases of Infectious Diseases notified, pursuant to the Infectious Disease (Notification) Act, 1889, during the twenty years 1913-1932 ; also the average for the quinquennial periods.

Year	Rate		Year	Rate	
1913	7.6	5.6	1923	3.4	4.7
1914	7.5		1924	5.6	
1915	6.2		1925	5.3	
1916	3.8		1926	4.5	
1917	2.7		1927	4.6	
1918	2.0	4.8	1928	6.5	7.3
1919	8.4		1929	3.6	
1920	6.5		1930	4.7	
1921	3.4		1931	15.3	
1922	3.5		1932	6.4	

EPIDEMIC DISEASES.

380 deaths were caused by epidemic diseases during the year, equivalent to 6.57 per cent. of the total number of deaths registered from all causes, or a death rate of 0.9 per 1,000 of the population. During the preceding year the deaths from epidemic diseases numbered 372 equivalent to 6.4 per cent. of the total deaths, or a death rate of 0.9.

One, or 0.26 per cent. of the total deaths from epidemic diseases was caused by typhoid fever ; 30 or 7.89 per cent. by measles ; 10 or 2.63 per cent. by scarlet fever ; 102 or 26.84 per cent. by whooping cough ; 19 or 5.0 per cent. by diphtheria ; 152 or 40 per cent, by diarrhœa and dysentery (only one death from the latter) and 66 or 17.37 per cent. by influenza.

The diseases from which the greatest number of deaths were registered were diarrhœa, whooping cough, influenza and measles, the figures being respectively 151, 102, 66 and 30. The comparative figures for the preceding year were 100, 32, 80 and 133.

Table XIX.

Shewing the annual death rate per 1,000 of the population from Epidemic Diseases during the twenty years 1913-1932 ; also the average rate for quinquennial periods.

Year	Rate		Year	Rate	
1913	2.3	1.9	1923	1.2	1.1
1914	2.7		1924	1.0	
1915	1.7		1925	1.3	
1916	1.7		1926	1.3	
1917	1.1		1927	0.9	
1918	1.8	1.4	1928	1.1	0.8
1919	1.5		1929	0.9	
1920	1.5		1930	0.5	
1921	1.4		1931	0.7	
1922	0.6		1932	0.9	

TABLE XX.

Shewing the number of deaths registered as having been caused by the principal Epidemic Diseases, also the annual rate of mortality per 10,000 of the population during the thirty-five years 1898-1932.

Year.	POPULATION.	Typhoid Fever		Typhus Fever		Smallpox		Scarlet Fever		Simple Contin'd Fever		Diphtheria		Whooping Cough		Measles		Diarrhœa	
		Number of Deaths.	Annual Rate per 10,000	Number of Deaths.	Annual Rate per 10,000.	Number of Deaths.	Annual Rate per 10,000.	Number of Deaths.	Annual Rate per 10,000	Number of Deaths.	Annual Rate per 10,000.	Number of Deaths.	Annual Rate per 10,000.	Number of Deaths.	Annual Rate per 10,000	Number of Deaths.	Annual Rate per 10,000.	Number of Deaths.	Annual Rate per 10,000.
1898	340,000	640	18.8	1	0.03	..	..	21	0.6	22	0.6	87	2.6	109	3.2	54	1.6	356	10.5
1899	350,000	263	7.5	1	0.03	..	..	24	0.7	10	0.3	61	1.7	215	6.1	146	4.2	285	8.1
1900	359,000	261	7.3	2	0.05	..	..	14	0.4	8	0.2	54	1.5	115	3.2	42	1.2	241	6.7
1901	350,862	341	9.7	8	0.2	1	0.03	13	0.4	26	0.7	65	1.9	162	4.6	240	6.8	292	8.3
1902	360,000	169	4.7	3	0.08	1	0.03	15	0.4	12	0.3	66	1.8	208	5.8	349	9.7	204	5.7
1903	360,000	136	3.8	4	0.1	..	..	24	0.7	18	0.5	40	1.1	168	4.7	125	3.5	277	7.7
1904	360,000	111	3.1	6	0.2	8	0.2	21	0.6	8	0.2	28	0.8	260	7.2	196	5.4	251	7.0
1905	360,000	128	3.6	1	0.03	1	0.03	35	1.0	6	0.2	32	0.9	24	0.7	227	6.3	295	8.2
1906	366,220	90	2.5	3	0.08	..	..	26	0.7	9	0.2	41	1.1	331	9.0	29	0.8	376	10.3
1907	370,163	82	2.2	3	0.08	..	..	13	0.3	2	0.05	38	1.0	64	1.7	201	5.4	212	5.7
1908	380,344	57	1.5	10	0.26	..	..	4	0.1	2	0.05	33	0.9	137	3.6	186	4.9	260	6.8
1909	386,576	20	0.5	..	..	..	..	4	0.1	2	0.05	18	0.4	213	5.5	10	0.3	244	6.3
1910	391,167	18	0.5	1	0.03	..	..	18	0.5	5	0.1	27	0.7	259	6.6	504	12.9	241	6.2
1911	386,449	15	0.4	2	0.05	..	..	37	1.0	..	..	32	0.8	67	1.7	2	0.05	290	7.5
1912	391,974	17	0.4	2	0.05	..	..	48	1.2	..	..	37	0.9	217	5.5	171	4.4	159	4.1
1913	396,000	22	0.6	1	0.03	..	..	153	3.9	..	..	53	1.3	41	1.0	182	4.6	458	11.6
1914	399,000	26	0.7	11	0.3	..	..	168	4.2	..	..	31	0.8	205	5.1	205	5.1	457	11.5
1915	403,000	10	0.2	..	..	..	..	107	2.7	..	..	27	0.7	134	3.3	177	4.4	240	6.0
1916	390,000	19	0.5	4	0.1	..	..	52	1.3	..	..	28	0.7	120	3.1	191	4.9	236	6.1
1917	393,000	39	1.0	6	0.15	..	..	11	0.3	..	..	22	0.6	57	1.5	98	2.5	180	4.6
1918	393,000	25	0.6	3	0.08	..	..	12	0.3	..	..	30	0.8	317	8.1	111	2.8	205	5.2
1919	401,000	17	0.4	1	0.02	..	..	138	3.4	..	..	30	0.7	9	0.2	137	3.4	263	6.6
1920	413,000	34	0.8	9	0.2	..	..	94	2.3	..	..	45	1.1	84	2.0	132	3.2	223	5.4
1921	420,000	15	0.4	3	0.07	..	..	11	0.3	..	..	31	0.7	222	5.3	17	0.4	279	6.6
1922	425,000	7	0.2	..	..	..	..	12	0.3	..	..	43	1.0	16	0.4	33	0.8	152	3.6
1923	429,000	4	0.09	..	..	..	..	26	0.6	..	..	24	0.6	182	4.2	126	2.9	154	3.6
1924	434,000	3	0.07	..	..	..	..	57	1.3	..	..	23	0.5	89	2.0	83	1.9	166	3.8
1925	438,000	18	0.41	..	..	..	..	49	1.1	..	..	38	0.9	99	2.3	167	3.8	203	4.6
1926	416,000	6	0.1	..	..	..	..	12	0.3	..	..	44	1.1	46	1.1	132	3.2	287	6.9
1927	416,000	8	0.2	..	..	..	..	10	0.2	..	..	30	0.7	117	2.8	1	0.02	195	4.7
1928	415,151	13	0.3	1	0.02	..	..	21	0.5	..	..	16	0.4	50	1.2	169	4.1	196	4.7
1929	415,151	4	0.1	..	..	..	..	8	0.2	..	..	19	0.5	138	3.3	77	1.9	149	3.6
1930	415,151	2	0.05	..	..	..	..	7	0.2	..	..	22	0.5	65	1.6	6	0.1	116	2.8
1931	415,151	1	0.02	..	..	..	..	13	0.3	..	..	13	0.3	32	0.8	133	3.2	100	2.4
1932	415,151	1	0.02	..	..	..	..	10	0.2	..	..	19	0.5	102	2.5	30	0.7	151	3.6

TABLE XXI.

Showing the number of cases of Infectious Diseases notified during the ten years, 1923-1932.

	Typhus Fever	Typhoid Fever	Scarlet Fever	Continued Fever	Diphtheria	Membraneous Croup	Small Pox	Cerebro-Spinal Meningitis	Poliomyelitis	Puerperal Fever	Erysipelas	Relapsing Fever	Encephalitis Lethargica	Ophthalmia Neonatorum	Measles	Whooping Cough
1923 ...	...	46	984	1	289	7	...	3	1	13	89	...	20	11	...	...
1924 ...	...	44	1818	...	280	6	...	...	1	9	42	...	221	6	...	...
1925 ...	...	143	1657	3	419	4	...	5	...	5	54	...	10	6	...	...
1926 ...	...	84	997	...	599	4	...	9	3	37	120	...	17	5	...	...
1927 ...	...	168	1113	1	484	2	...	10	4	20	85	...	8	9	...	...
1928 ...	3	186	1783	1	628	1	...	7	1	14	84	...	1	8	...	...
1929 ...	...	76	721	2	484	1	...	11	1	23	122	...	5	46	...	...
1930 ...	...	32	1132	...	618	...	...	24	9	20	109	...	2	...	11	...
1931 ...	...	53	1169	...	562	...	...	20	2	15	110	...	3	...	4430	...
1932 ..	..	33	1302	..	425	..	..	9	..	6	126	..	...	...	551	197

TABLE XXII.

Showing by Registrar's Districts the number of cases of Infectious Diseases notified pursuant to the Infectious Disease (Notification) Act, 1889.

DISTRICT.	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Simple Continued Fever.	Puerperal Fever.	Relapsing Fever.	Smallpox.	Diphtheria	Membraneous Croup.	Erysipelas	Cerebro-Spinal Meningitis.	Poliomyelitis.	Encephalitis Lethagica.	Total
1. Dock	..	1	16	..	..	..	..	11	..	2	1	..	..	31
2. Duncairn	..	2	162	..	2	..	..	63	..	21	1	..	..	251
3. Shankill	..	2	146	..	..	..	..	37	..	15	2	..	..	202
4. Workhouse	..	4	114	..	1	..	..	41	..	16	1	..	..	177
5. Millfield	..	1	40	..	..	..	..	15	..	2	..	..	..	58
6. College	..	..	66	..	..	..	..	20	..	7	..	..	..	93
7. Greencastle	..	1	12	..	..	..	..	9	..	..	..	..	..	22
8. Ligoniel	..	..	36	..	..	..	..	9	..	2	..	..	..	47
9. Falls	..	18	86	..	..	..	..	23	..	11	1	..	..	139
10. Woodvale	..	..	87	..	1	..	..	33	..	5	..	..	..	126
11. Ravenhill	..	2	179	..	1	..	..	53	..	10	..	..	..	245
12. Ballymacarrett	..	..	127	..	..	..	..	48	..	15	2	..	..	192
13. Ballyhackamore	..	..	92	..	1	..	..	28	..	8	..	..	..	129
14. Ballymaghan	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Central	..	1	34	..	..	..	..	16	..	7	1	..	..	59
16. Pottinger	..	1	105	..	..	..	..	19	..	5	..	..	..	130
Total	..	33	1,302	..	6	..	..	425	..	126	9	..	..	1,901

Table XXIII.

Showing by ages and sexes the number of cases of Infectious Diseases notified, pursuant to the Infectious Disease (Notification) Act, 1889.

DISEASE.	Under 1 Year.		1 Year and under 2 Years.		2 Years and under 5 Years.		5 Years and under 10 Years.		10 Years and under 15 Years.		15 Years and under 20 Years.		20 Years and under 25 Years.		25 Years and under 45 Years.		45 Years and under 65 Years.		65 Years and upwards.		Age unknown.		Total No. Males.	Total No. Females.	Grand Total.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F			
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Typhoid Fever	..	..	..	..	..	..	1	..	3	..	3	3	1	5	6	7	1	3	..	..	..	..	15	18	33
Scarlet Fever	10	4	34	36	195	207	252	291	66	92	13	26	8	10	23	29	2	3	..	..	1	..	604	698	1302
Simple Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	5	..	..	..	..	..	..	..	6	6
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Smallpox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	6	5	15	11	52	42	67	71	30	48	7	15	8	15	7	21	..	5	..	..	..	..	192	233	425
Membraneous Croup	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas	..	..	..	..	1	1	..	1	2	2	1	1	2	1	13	23	15	28	10	7	5	13	49	77	126
Cerebro-Spinal Meningitis	2	2	..	..	..	2	..	..	1	..	1	1	..	..	..	..	..	..	..	..	..	..	4	5	9
Poliomyelitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Encephalitis Lethargica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	18	11	49	47	248	252	320	363	102	142	25	46	19	32	49	85	18	39	10	7	6	13	864	1037	1901

MEASLES .. 551
WHOOPING COUGH .. 197

INFECTIOUS DISEASES.

NOTIFICATIONS.

Table XXIV.

Shewing the number of cases of Infectious Diseases notified as having occurred in each of the four quarters.

DISEASE	Quarter Ended				TOTAL
	2nd April, 1932	2nd July, 1932	1st Oct., 1932	31st Dec., 1932	
Typhus Fever	..	..	..	..	..
Typhoid Fever	10	12	9	2	33
Scarlet Fever	293	271	256	482	1,302
Simple Fever	..	..	..	..	..
Puerperal Fever	2	..	3	1	6
Relapsing Fever	..	..	..	..	..
Smallpox	..	..	..	..	..
Diphtheria	140	99	53	133	425
Membraneous Croup	..	..	..	..	..
Erysipelas	33	24	11	58	126
Cerebro Spinal Meningitis ..	2	4	1	2	9
Poliomyelitis	..	..	..	..	..
Encephalitis Lethargica	..	..	..	..	..
*Measles	..	..	..	551	551
*Whooping Cough	..	..	..	197	197
Total	480	410	333	1,426	2,649

*Under the Public Health (Notification of Measles and Whooping Cough) Northern Ireland Regulations, 1932, Measles and Whooping Cough were made notifiable from 1st December, 1932.

CORRECTED DIAGNOSIS.

4 Cases notified as Typhoid Fever ; 45 as Scarlet Fever and 64 as Diphtheria were found not suffering from the diseases notified. Of these, 5 cases notified as Scarlet Fever were found to be suffering from Measles ; 5 cases notified as Diphtheria were found to be suffering from Scarlet Fever and 1 case notified as Diphtheria was found to be suffering from Whooping Cough. The remainder were not suffering from any notifiable infectious disease.

TABLE No. XXV.

Shewing the number of deaths from Cancer and Malignant Tumours for the year 1932 as compared with the preceding 5 years.

Year.	Under	1	2	3	4	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85 and over	Grand Total	M	F
	1	2	3	4	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85				
1932	..	..	1	..	..	1	1	1	2	3	5	17	35	33	44	73	89	102	71	38	16	1	533	228	305
1927	1	1	2	..	..	..	1	2	2	2	5	11	19	39	55	72	73	46	58	28	12	1	430	196	234
1928	2	..	1	..	..	2	..	1	3	3	6	12	30	39	64	83	65	62	50	12	6	6	447	183	264
1929	..	..	..	1	..	..	2	2	1	4	11	13	25	38	70	69	68	48	43	25	13	3	436	184	252
1930	..	..	..	..	1	..	..	1	2	2	7	17	20	39	62	63	80	75	69	31	5	2	476	217	259
1931	..	..	..	..	2	1	1	2	..	5	7	21	21	36	58	78	87	75	57	46	11	..	508	235	273
TOTALS	3	1	3	1	3	3	4	8	8	16	36	74	115	191	309	365	373	306	277	142	47	12	2297	1015	1282

It will be seen from the above Table that the average number of deaths registered annually as having been caused by Cancer and other Malignant Tumours during the quinquennial period 1927 to 1931 was 459.4 (203 males and 256.4 females). The deaths notified to this department by the several Registrars of Births and Deaths for the City do not correspond with the number shown in the returns of the Registrar General for Northern Ireland, owing to the fact that the deaths of residents of the City which occur outside are not notified to this department, but are allocated by the Registrar-General, in his return, to Belfast, and the deaths of non-residents which occur in the City are allocated by the Registrar-General to the former residence of the deceased.

COUNTY BOROUGH OF BELFAST.

TREATMENT OF VENEREAL DISEASES.

Patients desiring treatment under the scheme may apply and attend at any of the following hospitals, infirmaries or institutions that they may choose for the purpose, viz. :—The Royal Victoria Hospital, the Mater Infirmorum Hospital, and the Belfast Union Hospital ; at which there is available confidential treatment for all classes of the community, free of cost and irrespective of the means or place of residence of the patient including, as regards all these institutions, hospital accommodation for cases that cannot be properly treated at an out-patient department, or dispensary, or other clinic, and as regards the two first mentioned, accommodation for treatment at an out-patient department, in accordance with the following :—

Days and Times at which treatment is available—

Royal Victoria Hospital.—Daily from 9 till 11 a.m. (Sundays excepted), and evening clinic on Mondays at 7 p.m.

Mater Infirmorum Hospital.—Tuesdays and Saturdays, from 9-30 till 11-30 a.m., and Thursdays, from 8 till 10 p.m.

Union Infirmary.—Daily, from 11 a.m. for admissions.

VENEREAL DISEASES.

Statement showing the services rendered at the Treatment Centre at Royal Victoria Hospital, Belfast, during the year ended 31st March 1933, classified according to the areas in which the patients resided.

Name of County or County Borough.	Belfast.	Down.	Antrim.	Armagh.	Derry Co.	Fermanagh.	Port.	Tyrone.	Cavan.	Total.
A. Number of cases from each area dealt with during the year for the first time and found to be suffering from :—										
Syphilis	450	23	17	1	2	—	12	1	—	506
Gonorrhoea	367	16	21	3	—	1	18	—	—	426
Soft Chancre	1	—	—	—	—	—	—	—	—	1
Conditions other than Venereal ..	1,969	3	4	1	—	—	9	—	—	1,986
Total	2,787	42	42	5	2	1	39	1	—	2,919
B. Total number of attendances of all patients residing in each area	23,637	1,034	704	160	17	1	231	19	—	25,803
C. Aggregate number of " Inpatient days " of all patients residing in each area	1,239	85	106	12	43	—	—	85	—	1,570
D. Number of doses of arseno-benzol compounds given in the : 1. Out-Patient Clinic. ..	9,031	869	520	131	21	—	102	9	—	10,683
2. In-Patient Dept. .. to patients residing in each area	228	29	18	—	6	—	—	—	1	282

VENEREAL DISEASES.

Return relating to all Persons who were Treated at the Treatment Centre at Royal Victoria Hospital, Belfast, during the year ended 31st March, 1933.

	Syphilis.		Gonorrhoea.		Soft Chancre.		Conditions other than Venereal.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Female
1. Number of cases which:— (a) at the beginning of the year under report were under treatment or observation for ..	774	338	591	16	1	—	—	—	1.366	354
(b) had been marked off in a previous year as having ceased to attend or as transferred to other Centres, and which returned to the Treatment Centre during the year under report suffering from the same infection	173	60	113	—	—	—	—	—	286	60
Total—Items 1 (a) and (b) ..	947	398	704	16	1	—	—	—	1,652	414
2. (a) Number of cases dealt with at the Treatment Centre during the year for the first time ..	365	141	420	6	1	—	1,331	655	2,117	802
Total—Items 1 (a), 1 (b) and 2 (a) ..	1,312	539	1,124	22	2	—	1,331	655	3,769	1,246
2. (b) Number of cases included in Item 2 (a) known to have received previous treatment at other Centres for the same infection	6	1	6	1	—	—	—	—	12	2
3. Number of cases which ceased to attend (a) before completing the first course of treatment for	106	31	109	—	—	—	—	—	215	31
(b) after 1 or more courses, but before completion of treatment for	25	24	—	—	—	—	—	—	25	24
(c) after completion of treatment, but before final tests as to cure of	—	—	—	—	—	—	—	—	—	—
4. Number of cases transferred to other Treatment Centres after treatment for	9	1	1	—	—	—	—	—	10	1
5. Number of cases discharged after completion of treatment and observation for	—	—	175	—	—	—	—	—	175	—
6. Number of cases which, at the end of the year under report, were under treatment or observation for	1,172	483	839	22	2	—	—	—	2,013	505
Total—Items 3, 4, 5 and 6 ..	1,312	539	1,124	22	2	—	—	—	2,438	561
7. Out-patient attendances :— (a) For individual attention by the Medical Officer	—	—	—	—	—	—	—	—	—	—
(b) For intermediate treatment, e.g., irrigation, dressings, etc.	159	7	10,519	—	—	—	—	—	10,678	7
Total Attendances .. 25,803	—	—	—	—	—	—	—	—	—	
8. Aggregate number of "Inpatient days" of treatment given to persons who were suffering from	850	69	513	138	—	—	—	—	1,363	207

VENEREAL DISEASES.

Statement showing the services rendered at the Treatment Centre at Mater Hospital, Belfast, during the year ended 31st March, 1933 classified according to the areas in which the patients resided.

Name of County or County Borough.	Belfast.	Co. Down.	Co. Derry.	Co. Antrim.	Co. Tyrone.	Port.	Total.
A. Number of cases from each area dealt with during the year for the first time and found to be suffering from :—							
Syphilis	119	8	1	11	1	3	143
Gonorrhoea	183	6	1	7	—	6	203
Soft Chancre	11	1	—	1	—	2	15
Conditions other than Venereal ..	396	5	—	8	—	4	413
Total	709	20	2	27	1	15	774
B. Total number of attendances of all patients residing in each area	6,167	144	2	172	1	44	6,530
C. Aggregate number of " Inpatient days " of all patients residing in each area	672	—	44	98	6	—	820
D. Number of doses of arseno-benzol compounds given in the : 1. Out-Patient Clinic. ..	1,700	40	—	47	—	3	1,790
2. In-Patient Dept. ..	115	—	10	14	1	—	140
to patients residing in each area ..							

VENEREAL DISEASES.

Return relating to all Persons who were Treated at the Treatment Centre at Mater Hospital, Belfast, during the year ended 31st March, 1933.

	Syphilis.		Gonorrhoea.		Soft Chancre.		Conditions other than Venereal.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1. Number of cases which:— (a) at the beginning of the year under report were under treatment or observation for ..	133	48	157	13	3	—	53	36	346	97
(b) had been marked off in a previous year as having ceased to attend or as transferred to other Centres, and which returned to the Treatment Centre during the year under report suffering from the same infection	26	11	16	—	—	—	—	—	42	11
Total—Items 1 (a) and (b) ..	159	59	173	13	3	—	53	36	388	108
2. (a) Number of cases dealt with at the Treatment Centre during the year for the first time ..	97	45	183	19	15	—	264	149	559	213
Total—Items 1 (a), 1 (b) and 2 (a) ..	256	104	356	32	18	—	317	185	947	321
2. (b) Number of cases included in Item 2 (a) known to have received previous treatment at other Centres for the same infection	23	4	32	—	—	—	—	—	55	4
3. Number of cases which ceased to attend (a) before completing the first course of treatment for	41	15	52	3	—	—	—	—	93	18
(b) after 1 or more courses, but before completion of treatment for	33	18	25	—	—	—	—	—	58	18
(c) after completion of treatment, but before final tests as to cure of	18	9	33	12	—	—	—	—	51	21
4. Number of cases transferred to other Treatment Centres after treatment for	6	—	12	—	—	—	—	—	18	—
5. Number of cases discharged after completion of treatment and observation for	24	17	94	8	17	—	285	171	420	196
6. Number of cases which, at the end of the year under report, were under treatment or observation for	134	45	140	9	1	—	32	14	307	68
Total—Items 3, 4, 5 and 6 ..	256	104	356	32	18	—	317	185	947	321
7. Out-patient attendances :— (a) For individual attention by the Medical Officer.	1,416	688	1,378	89	32	—	418	303	3,244	1,080
(b) For intermediate treatment, e.g., irrigation, dressings, etc.	—	—	2,206	—	—	—	—		2,206	—
Total Attendances	1,416	688	3,584	89	32	—	418	303	5,450	1,080
8. Aggregate number of "Inpatient days" of treatment given to persons who were suffering from	394	382	44	—	—	—	—	—	438	382

Union Infirmary.—The number of patients treated during the year ended 31st March, 1933, at the Belfast Union Hospital was 309.

DISINFECTING STATION.

The work undertaken at the Disinfecting Station includes :—

The disinfecting of bedding and clothing from houses where cases of Infectious Diseases have occurred.

The personal bathing and the disinfecting of the clothing of persons who have been in contact with Infectious Diseases, and whose business includes the handling of food-stuffs.

The bathing of verminous persons and the cleansing and disinfection of their clothing.

The delivery once per month of a quantity of disinfectants to each non-transferred Public Elementary School in the City.

The disinfection of clothing, etc., intended for export to the Irish Free State, for which service a small charge is made.

The cleansing of Emigrants who have failed to pass the United States Medical Inspector at the port, and the disinfection by steam or otherwise of all their baggage is also undertaken. For this service the various Shipping Companies are charged a fee of £10 for the use of the plant and staff on each occasion, plus a charge of 5/- per person dealt with.

We have also attached to the Disinfecting Station a Store where the various disinfectants are kept, and from where a supply of dilute disinfectants is given out to those poor persons who apply for same.

TABLE XXVI.

SUMMARY OF THE WORK DONE AT THE DISINFECTING STATION AND BY THE MOTOR VANS FOR THE YEAR.

Work done by Motor Vans.						Number of Articles Disinfected for		No. of Bottles of dilute Disinfectants issued free to Poor Persons	Disinfection of Persons						Verminous Houses Sprayed	Library Books taken from Infected Dwelling Houses.			Free School Books taken from Infected Houses and Destroyed
Number of calls at		Mileage	Gallons of Motor Spirit used	Average Miles per gallon	No. of calls re other work.	Infectious Disease Cases	Export to Irish Free State		Bathed		Sprayed		Verminous Persons Bathed			Free Public Library Books Destroyed	Private Library Books Disinfected and returned	Schools Library Books Destroyed	
Infected Dwelling Houses	Public Elementary Schools.								M.	F.	M.	F.	M.	F.					
4,090	907	8676	577½	15.02	130	15,227	1,875	15,719	85	28	167	89	29	84	69	272	98	7	101

TABLE XXVII.

DISINFECTANTS.

IN STOCK AND RECEIVED DURING THE YEAR.

	Civic	Formalin	Paraffin Oil	Crude Oil	Petroleum Fluid	Izal	Sulphur Candles	Carbolic Acid	Virama	Insect Oil	Solution " D "	Zaldecide	Liquid Soap	Pine Spray
	Gals.	Gals.	Gals.	Gals.	Gals.	Gals.	Box	Gals.	Gals.	Gals.	Gals.	Gals.	Gals.	Gals.
In Stock January 1st, 1932	91½	20	39½	32	43	12	1	3	12	6½	9¾	4¾	39½	39
Received during the year	480	60 Bots.	..	..	40	20	..	..	..	20	..	..	..	..
Total ..	571½		39½	32	83	32	1	3	12	26½	9¾	4¾	39½	39

TABLE XXVIII.

DISTRIBUTION OF DISINFECTANTS.

	Gals.	Gals.	Bots.	Gals.	Gals.	Gals.	Gals.			Gals.	Gals.	Gals.	Gals.	Gals.	Gals.
Public Elementary Schools	264½		..	..	..	..	..	..	..	..	..	..	..	..	..
Disinfecting Houses	1	18½	54	..	..	..	4	¼ Box	..	..	..	..	..	..	1
Disinfecting Station	73	1½	6	14½	10	..	..	..	..	..	..	..	..	..	..
Drain Testing	14	..		..	..	43	..	..	..	2	..	..	..	..	..
Verminous Houses	..	..		..	..	..	..	..	..	..	..	2	1½	2¾	..
Insect Spraying	..	..		10	5	..	..	..	..	..	16	3¾	3¼	..	..
City Hall	11	..		..	..	..	..	..	..	..	..	..	..	..	..
Municipal Laboratory	1½	..		..	..	..	..	..	..	..	..	..	..	..	..
Free Distribution	204½	..		..	..	..	8	..	..	10	..	..	..	..	..
	569½	20	60	24½	15	43	12	¼ Box	..	12	16	5¾	4¾	2¾	1
In Stock December 29, 1932. ..	2	..		15	17	40	20	¾ ,,	3	..	10½	4	..	36¾	38
	571½	20	60	39½	32	83	32	1 Box	3	12	26½	9¾	4¾	39½	39

PURDYSBURN FEVER HOSPITAL.

To the Chairman and Members of the Public Health Committee.

Gentlemen,

I have the honour to present to you the following report on the working of Purdysburn Fever Hospital for the year 1932 (52 weeks ended 31st December, 1932).

2,066 cases were admitted during this period, there remained from the previous year 192, making a total of 2,258 cases under treatment.

2,038 of these were treated to a conclusion, leaving 220 cases in hospital at the end of the year.

The number of admissions in the previous year had been 1,962 and the average number of admissions in the previous five years 2,047.

TABLE I.

Showing the classification of the cases and the mortality in cases treated to a conclusion.

Disease.	Remaining on 2/1/32	Admitted during year	Total	Remain-in on 31/12/32	Nett	Died	Mortality % calculated on cases treated on a conclusion	
Enteric—Typhoid	..	15	15	1	14	3	21.43	8.57
Enteric—Para A	..	..	..	..	..	..	..	
Enteric—Para B	1	20	21	..	21	0	0.00	
Typhus	..	..	..	..	..	..	..	
Scarlatina	155	1,421	1576	180	1396	10	0.72	
Diphtheria	29	354	383	33	350	11	3.14	
Diphtheria Carrier	..	7	7	..	7	0	0.00	
Cerebro-Spinal Fever	1	17	18	1	17	4	23.53	
Pneumonia	..	..	..	..	..	..	..	
Tubercular Meningitis	1	8	9	..	9	9	100.00	
Other Diseases	5	219	224	5	219	20	9.13	
Quarantine	..	4	4	..	4	0	0.00	
Epidemic Encephalitis	..	..	..	..	..	..	..	
Acute Poliomyelitis	..	1	1	..	1	0	0.00	
Smallpox	..	..	..	..	..	..	..	
TOTALS	192	2066	2258	220	2038	57	2.80	
Comparative Numbers in 1931	326	1962	2288	192	2096	59	2.81	

ENTERIC FEVER.

35 cases of Enteric were admitted during the year. These included 15 cases of Typhoid and 20 cases of Paratyphoid B.

There were no cases of Paratyphoid A.

One case of Paratyphoid B remained from the previous year, making a total of 15 cases of Typhoid and 21 cases of Paratyphoid B under treatment.

At the end of the year 1 case of Typhoid remained over.

Thus 14 cases of Typhoid and 21 cases of Paratyphoid B were treated to a conclusion.

Total enterics 35, of whom 3 died ; case mortality 8.57 per cent.

Of the 35 admissions, 31 came from the city and 4 from outside the city boundary.

In the previous year the admissions numbered 47.

The average number of admissions in the previous five years was 99.

TABLE II.

Showing the case mortality in age periods in Typhoid (B. Typhosus).

Ages.	Cases.	Died.	Mortality per cent.
Under 5 years	0	0	0.00
5—10 ,,	1	0	0.00
10—20 ,,	4	1	25.00
20—30 ,,	3	0	0.00
Over 30 ,,	6	2	33.33
TOTALS	14	3	21.43

TABLE III.

Showing the case mortality in age periods in Paratyphoid B.

Ages.	Cases.	Died.	Mortality per cent.
Under 5 years	0	0	0.00
5—10 ,,	1	0	0.00
10—20 ,,	7	0	0.00
20—30 ,,	5	0	0.00
Over 30 ,,	8	0	0.00
TOTALS	21	0	0.00

TABLE IV.

Showing the number of Enteric Fever cases admitted in each month.

January	2	July	3
February	8	August	8
March	1	September	2
April	1	October	0
May	2	November	0
June	7	December	1

DIPHTHERIA.

354 cases were admitted during the year, making with the 29 cases remaining from the previous year 383 cases under treatment.

33 cases still remained in hospital at the end of the year.

350 cases were treated to a conclusion, with 11 deaths giving a case mortality of 3.14 per cent.

The average stay in hospital of the cases which recovered was 31.8 days.

Of the 354 cases admitted, 333 came from the city and 21 from outside the city boundary.

In the previous year the admissions numbered 466.

The average number of admissions in the previous five years was 517.

TABLE V.

Showing the case mortality in age periods.

Ages.	Cases.	Died.	Mortality per cent.
Under 1 year ..	7	1	14.28
1— 2 years	16	1	6.25
2— 5 ,, ...	63	5	7.94
5—10 ,, ...	135	4	2.96
10—20 ,, ...	85	0	0.00
20—30 ,, ...	28	0	0.00
Over 30 ,, ...	16	0	0.00
TOTALS	350	11	3.14

LARYNGEAL DIPHTHERIA.

25 cases required operative interference for laryngeal obstruction. All these cases were treated by intubation of the larynx (O'Dwyer).

3 cases died giving a case mortality of 12.0 per cent.

TABLE VI.

Showing results in age periods in cases in which intubation of the larynx was performed.

Ages.	Cases.	Died.	Mortality per cent.
Under 1 year	3	0	0.00
1— 2 years	6	1	16.66
2— 3 ,, ...	2	1	50.00
3— 4 ,, ...	6	0	0.00
4— 5 ,, ...	3	1	33.33
Over 5 ,, ...	5	0	0.00
TOTALS	25	3	12.00

DIPHTHERIA CARRIER.

7 cases of Diphtheria Carriers were admitted during the year and all were treated to a satisfactory conclusion.

CEREBRO SPINAL FEVER.

17 cases of Cerebro-Spinal Fever were admitted during the year and with 1 case remaining from the previous year made a total of 18 cases under treatment.

1 case remained at the end of the year so that 17 cases were treated to a conclusion. Of these 4 died giving a case mortality of 23.53 per cent.

In the previous year the admissions numbered 18.

The average number of admissions in the previous five years was 13.

TABLE VII.

Showing the case mortality in age periods.

Ages.	Cases.	Died.	Mortality per cent.
Under 1 year	4	2	50.00
1— 5 years	3	0	0.00
5—10 ,, ...	2	0	0.00
10—20 ,, ...	2	0	0.00
20—30 ,, ...	6	2	33.33
Over 30 ,, ...	0	0	0.00
TOTALS	17	4	23.53

TUBERCULAR MENINGITIS.

8 cases of Tubercular Meningitis were admitted during the year. 1 case remained over from the previous year so that 9 cases were treated to a conclusion. All of these ended fatally.

ACUTE POLIOMYELITIS.

1 case of Acute Poliomyelitis was admitted during the year. This case. recovered and was discharged with considerable paralysis.

PNEUMONIA.

There were no admissions of Pneumonia during the year.

EPIDEMIC ENCEPHALITIS.

There were no admissions of Epidemic Encephalitis during the year.

TYPHUS.

There were no admissions of Typhus Fever during the year.

SCARLATINA.

1,421 cases were admitted during the year, making, with 155 cases remaining over from the previous year a total of 1,576 cases under treatment.

180 cases still remained in hospital at the end of the year, so that 1,396 cases were treated to a conclusion.

10 of these ended fatally, giving a case mortality of 0.72 per cent.

The average stay in hospital of the cases which recovered was 33.6 days.

Of the 1,421 admissions, 1,254 came from the city and 167 from outside the city boundary.

In the previous year the admissions numbered 1,173.

The average number of admissions in the previous five years was 1,200.

TABLE VIII.

Showing the case mortality in age periods.

Ages.	Cases.	Died.	Mortality per cent.
Under 1 year	10	0	0.00
1— 2 years	74	1	1.35
2— 5 ,, ...	419	5	1.19
5—10 ,, ...	595	3	0.50
10—20 ,, ...	212	1	0.47
20—30 ,, ...	50	0	0.00
Over 30 ,, ...	36	0	0.00
TOTALS	1,396	10	0.72

" RETURN CASES."

In 47 instances the return home of a patient from hospital was followed by other cases in the house, giving a return case rate of 3.39 per cent. On the average these 47 cases had reached the 36th day from the onset of the disease when they were discharged.

OTHER DISEASES.

219 cases of " Other Diseases " were admitted during the year. These included cases admitted for observation and which did not develop any of the ordinary infectious diseases, and also members of the staff who became ill from causes other than infectious diseases, and who were warded in the Isolation Pavilion for the convenience of nursing.

5 cases remained from the previous year, and 5 cases remained at the end of this year, so that 219 cases were treated to a conclusion.

Of these 20 died giving a case mortality of 9.13 per cent.

The causes of these deaths were as follows :—

Broncho Pneumonia ..	4	Otitis Media and Cerebral Abscess	1
Pharyngeal Abscess ..	3	Gastro Enteritis	1
Septic Tonsillitis	2	Whooping Cough	1
Pneumococcal Meningitis ..	2	Lymphatic Leukaemia ..	1
Myocarditis	2	Ulcerative Colitis	1
Acute Miliary Tuberculosis ..	1	Measles	1

INFECTIOUS DISEASES AMONGST THE STAFF.

I Temporary House Physician developed Scarlatina.

1 House Physician developed Diphtheria.
Both made good recoveries.

The Staff at the end of the year consisted of :—

1 Medical Superintendent
1 Resident Medical Officer.
1 House Physician.
1 Steward.
1 Clerk.
1 Storekeeper.
1 Engineer.
2 General Mechanics.
3 Motor Drivers.
1 Van Man.
4 Firemen.
1 Pumping Station Engine Man.
5 Day Porters.
1 Gate Porter.
1 Night Porter.
1 Disinfector.
1 Foreman Gardener.
3 Groundsmen.
1 Matron.
1 Assistant Matron.
1 Night Superintendent.
1 Night Superintendent (joint).
1 Housekeeper.
9 Ward Sisters.
35 Nurses.
1 Seamstress.
1 Head Laundress.
5 Laundry Maids.
1 Cook.
2 Kitchen Maids.
5 General Maids.
12 Ward Maids.

Throughout the year the staff have discharged their responsible duties very satisfactorily.

I am,

Gentlemen,

Your obedient Servant,

A. GARDNER ROBB,

Visiting Physician in Charge.

BELFAST INFIRMARY, FEVER HOSPITAL.

SUMMARY FOR 1932.

From 2nd December, 1932 to 31st December, 1932.

DR. A. GARDNER ROBB.

Disease	Remaining 2/1/32	Admitted to Hospital	Gross Total	Remaining 31/12/32	Nett Total	No. of Deaths	% Mortality
Typhoid	..	..	..	..	..	..	..
Epidemic Diaarhoea ..	..	..	..	..	..	..	..
Measles	..	135	135	22	113	11	9.73
Scarlatina	..	54	54	..	54	..	0.00*
Whooping Cough	16	157	173	18	155	35	22.59
Mumps	1	5	6	1	5	..	0.00
Chicken Pox	8	94	102	4	98	..	0.00
Erysipelas	6	83	89	8	81	6	7.40
Diphtheria	..	25	25	..	25	1	4.00*
General Medical	41	354	395	39	356	30	8.42
Rubella	..	..	..	..	..	..	..
Pneumonia	4	5	9	..	9	3	33.33
Tonsilitis	9	196	205	6	199	3	1.80
Epidemic Encephalitis ..	..	..	..	..	..	..	..
Chronic Encephalitis ..	25	19	44	25	19	..	0.00
Tubercular Meningitis ..	..	12	12	..	12	9	75.00
Influenza	1	37	38	2	36	2	5.55
Quarantine	1	..	1	..	1	..	0.00
Cerebro Spinal Fever ..	..	1	1	..	1	1	100.0
Total ..	112	1177	1289	125	1164	101	8.67

*The cases of Scarlatina and Diphtheria, were not all treated to a conclusion, many being transferred to Purdysburn Fever Hospital.

Municipal Laboratory,
Queen's University,
Belfast,
17th June, 1933.

Dear Sir,

I beg to present the report of the work carried out in the Laboratory during the year 1932.

The number of specimens submitted for examination was 11,356, a decrease of 900 on the figures of last year.

The work may be summarised in the following way :—

INFECTIOUS DISEASES.

1.—Diphtheria—		
Throat Swabs	3,745	
Nasal Swabs	809	
Direct Examinations	179	
Virulence Tests	34	
		4,767
2.—Vincent's Angina—		177
3.—Enteric Group—		
Agglutination Tests	333	
Faeces, Blood, Urine, etc.	36	
		369
4.—Scarlatina—		2
5.—Typhus—		
Wilson-Weil-Felix Reaction		2
6.—Meningitis—		
Cerebro-Spinal Fluids	223	
West Swabs	2	
		225
7.—Tuberculosis—		
Sputa	613	
Pus	44	
Urine	123	
Pleural Fluids	9	
C.S. Fluids	55	
Faeces, etc.	10	
		854
8.—Ringworm—		13
9.—Plague—		281

B. ABORTUS.

Blood Examinations	328	
Milk Examinations	37	
		365

VENEREAL DISEASES.

Wasserman Reactions	1,838	
Microscopical Examinations	207	
		2,045

PATHOLOGICAL EXAMINATIONS.

Tumours, etc.		131

MILK EXAMINATIONS.

Fresh Milk	278	
Pasteurised Milk	32	
Grade A T.T. Milk	44	
Examinations for B. Tuberculosis	503	
		857

WATER AND FOODSTUFFS.

Waters	26	
Foods	7	
		33

VACCINES.

Autogenous	22	
Tuberculins	7	
Stock	2	
Whooping Cough Vaccines	156	
		187

UNCLASSIFIED EXAMINATIONS.

Urines, etc.	1,048
GRAND TOTAL	11,356

In the following tables a more detailed consideration is given to the above groups.

TABLE I.

Swabs Examined for Diphtheria.

Month	Throat Swabs	Pos.	Neg.	Nasal Swabs	Pos.	Neg.	From Doctors	From Hosps.	School Med. Ser.	Contacts Pos.	Contacts Neg.	Total
January	290	59	231	77	10	67	87	141	139	13	126	367
February	417	88	329	98	11	87	109	234	172	10	178	515
March	385	78	307	95	6	89	126	198	156	8	150	480
April	336	50	286	59	6	53	120	168	107	2	97	395
May	252	30	222	69	10	59	104	103	114	8	118	321
June	392	31	361	89	16	73	191	138	152	10	237	481
July	123	11	112	23	1	22	52	75	19	0	22	146
August	147	19	138	43	10	33	63	70	57	0	48	190
September	212	24	188	56	11	45	89	81	98	0	84	268
October	325	41	284	58	14	44	101	200	82	3	135	383
November	570	61	509	69	10	59	141	387	111	16	276	639
December	296	42	254	73	14	59	131	125	113	9	101	369
Total	3745	524	3221	809	119	690	1314	1920	1320	79	1572	4554

179 Swabs were examined by the direct method for Diphtheria. Of these, 22 were returned positive.

34 Virulence Tests were performed, of which 23 were positive.

177 Swabs were examined for Vincent's Angina ; in 23 of these the causal organisms were present.

TABLE II.

Blood from Suspected Enteric Group Infections.

Month	Positive T	Positive A	Positive B	Negative T	Negative A	Negative B	From Doctors	From Hospitals	Total
January	0	0	0	4	4	4	4	0	4
February	3	0	0	4	7	7	3	4	7
March	7	0	1	1	8	7	5	3	8
April	2	0	0	7	9	9	5	4	9
May	0	0	0	11	11	11	5	6	11
June	0	0	9	20	20	11	5	15	20
July	0	0	2	6	6	4	4	2	6
August	2	0	2	18	20	18	15	5	20
September	0	0	1	10	10	9	7	3	10
October	0	0	0	4	4	4	4	0	4
November	0	0	0	7	7	7	6	1	7
December	1	0	0	4	5	5	5	0	5
Total	15	0	15	96	111	96	68	43	111

Of the 30 positive reactions, 15 were positive to Typhoid, 15 to Paratyphoid B., and none to Paratyphoid A.

Wilson-Weil-Felix tests were done on 2 samples of blood, both of which were negative. One Test was done for B. Aertrycke, Newport, Mutton and Stanley; and one test was done for B. Gaertner.

Table III.

Examination of Sputa for B. Tuberculosis, Etc.

Source	Positive	Negative	Total
Hospitals	0	10	10
General Practitioners	110	493	603
Total	110	503	613

39 Specimens of Sputa were examined for organisms other than B. Tuberculosis.

Table IV.

Examinations of Cerebrospinal Fluids.

Month	B. Tuberculosis Pos.	B. Tuberculosis Neg.	Meningococci Pos.	Meningococci Neg.	Other Organisms Pos.	Other Organisms Neg.	Protein	Total
January	0	6	0	8	0	8	9	31
February	0	3	0	3	0	3	2	11
March	0	5	2	5	0	5	5	22
April	2	5	1	6	1	6	4	25
May	1	3	4	2	1	4	3	18
June	1	3	0	3	0	3	0	10
July	0	2	0	6	1	3	0	12
August	1	10	0	12	0	7	8	38
September	0	8	2	9	0	9	2	30
October	0	2	0	2	0	2	0	6
November	1	1	0	3	0	3	1	9
December	0	1	1	4	0	5	0	11
Totals	6	49	10	63	3	58	34	223

Of the 3 Cerebrospinal Fluids which contained other organisms, 2 gave pure cultures of Pneumococci, and the other one, a pure culture of Streptococcus Hemolyticus.

2 West Swabs were taken from contacts and examined for Meningococci. Both were negative.

RINGWORM.

13 Specimens of hairs were submitted for examinations; of these, 3 were infected with the small spored fungus.

B. ABORTUS.

328 Specimens of Blood were examined by agglutination for Br. Abortus. Of these, 2 were returned Positive.

37 Milks were examined for the presence of Br. Abortus, and of these, 3 Specimens contained the organism.

TABLE V.

Examinations carried out under the Venereal Diseases Scheme.

The number of specimens submitted during the year was 2,045.

Source of Specimens.

	Blood	Smears.
Co. Borough of Belfast ..	1,795	204
Co. Antrim.	14	1
Co. Down	15	0
Co. Armagh	7	1
Co. Tyrone	2	1
Co. Fermanagh	1	0
Co. Derry	3	0
Co. Cavan	1	0

The specimens can be grouped as follows :—

Detection of Treponemata	2
Detection of Gonococci	205
Wasserman Reactions (Blood)	1,819
Wasserman Reactions (C.S.F.)	19

WASSERMAN REACTIONS.

Stage of Syphilis indicated by Clinical Report	No. of Tests	Number Positive	Number Negative
Primary . .	174	64	110
Secondary, Untreated ..	135	29	106
Secondary, Treated ..	59	26	33
Tertiary	589	110	479
Latent, Untreated ..	698	68	630
Latent, Treated ..	8	4	4
Congenital	153	29	124
Particulars not Stated ..	22	7	15
	1,838	337	1,501

37 Specimens of blood were taken from patients referred to the Laboratory by general practitioners.

BACTERIOLOGICAL EXAMINATIONS OF MILK.

During the year 857 examinations were made. 278 of these were specimens of fresh milk, 32 were of pasteurised milk, 44 were of Grade A T.T. milk and 149 were examined specially for B. Tuberculosis.

TABLE VI.

This table shows the number and classification per month.

Month	Grade A T.T. Milk	Pasteurised Milk	Fresh Milk	Specially examined for B. Tuberculosis	
January ..	0	1	43	21	65
February ..	2	6	36	20	64
March ..	0	7	33	12	52
April ..	2	3	31	14	50
May ..	8	4	22	11	45
June ..	2	6	37	14	59
July ..	1	1	18	6	26
August ..	1	1	23	10	35
September ..	0	3	13	0	16
October ..	10	0	12	17	39
November ..	15	0	1	18	34
December ..	3	0	9	6	18
	44	32	278	149	503

TABLE VII.

This table shows the source of the specimens of milk.

Month	Street	Milkshop	Railway	Other Sources	Total
January	8	17	0	19	44
February	30	14	0	4	48
March	9	15	0	16	40
April	17	15	4	0	36
May	15	15	0	4	34
June .. .	32	12	0	1	45
July . .	12	7	0	1	20
August . .	20	4	0	1	25
September . ..	16	0	0	0	16
October	21	1	0	0	22
November	14	0	0	2	16
December	8	0	1	3	12
	202	100	5	51	358

Of 278 specimens of fresh milk, 165 contained B. Coli in 1/10cc., a percentage of 59.35. 93 contained lactose fermenting organisms in 1/100c.c, i.e. 33.45 per cent. ; 44 contained B. Coli in 1/1000cc., a percentage of 15.27.

38 Specimens of fresh milk (13.67 per cent.) showed more than 200,000 organisms per cc.

Of 32 specimens of Pasteurised milk, 7 contained over 30,000 organisms per cc., a percentage of 21.88.

15 Specimens of Pasteurised milks, showed B. Coli present in 1/10cc., a percentage of 46.88.

4 Specimens of Pasteurised milk showed B. Coli present in 1/100cc., a percentage of 12.5.

One specimen of Pasteurised milk showed B. Coli present in 1/1000cc., a percentage of 3.12.

44 Specimens of Grade A T.T. milk were examined, 5 of these contained B. Coli in 1/10cc., a percentage of 11.36. 2 contained B. Coli in 1/100cc., a percentage of 4.55, and 8 contained more than 200,000 organisms per cc., a percentage of 18.18.

142 milks were examined by the biological method for B. Tuberculosis. Of these, 5 were infected with Live B. Tuberculosis. This gives a percentage of 3.52.

TABLE VIII.

Miscellaneous Examinations.

Urine Examinations, Microscopical	293
Urine Examinations, Chemical	160
Urine Examinations, Bacteriological	259
Pus	169
Pathological Fluids	17
Faeces	19
Blood Cultures	16
Blood Films and Counts	76
Sputa, other than T.B.	39
	1,048

I am, Sir,

Your obedient servant,

To Dr. Thomson, M.S.O.H.,
City Hall,
Belfast.

GEO. F. W. TINSDALE,
City Bacteriologist.

PORT SANITARY AUTHORITY, BELFAST.

The Corporation of Belfast as the Sanitary Authority was permanently constituted the Port Sanitary Authority for the Port of Belfast by the Local Government Board (Ireland) Provisional Orders Confirmation (No. 4) Act, 1900.

The jurisdiction of the Port Sanitary Authority extends to all that part of the said port of Belfast which lies on the landward side of a straight line drawn from Blackhead in the Larne Rural District to Orlock Point in the Newtownards Rural District, together with the waters of the said port of Belfast within such limits, and all docks, basins, harbours, creeks, rivers, channels, bays and streams within the aforesaid limits, and the place or places which may from time to time be appointed as the Customs Boarding Station or Stations for such part of the said port, and the place or places for the time being appointed for the mooring or anchoring of ships for such part of the said port, under any regulations for the prevention of the spread of diseases issued under the statutes in that behalf and for the purpose of any regulation, as aforesaid, shall also extend to any ship which in pursuance thereof, or any directions given thereunder, may be moored or anchored at the place appointed thereunder, as aforesaid, or which may be on its way thither. The expenses of the Port Sanitary Authority are contributed by the Urban and Rural Sanitary Authorities in the following proportions :—

The Corporation of Belfast	..	92 %
The Carrickfergus Urban District Council	..	1 %
The Holywood Urban District Council	..	1 %
The Bangor Borough Council	..	1 %
The Belfast No. 1 Rural District Council	..	1½%
The Belfast No. 2 Rural District Council	..	1½%
The Larne Rural District Council	..	1 %
The Newtownards Rural District Council	..	1 %

I. **Amount of Shipping entering the Port during the year.**

TABLE A.

	Number	Tonnage	Number Inspected.		Number reported to be Defective.	Number of vessels on which Defects were Remedied.	Number of vessels reported as having or having had during the voyage Infectious Disease on Board.
			By Medical Officer.	By Sanitary Inspector.			
Foreign :—							
Steamers	501	766,159	36	501	191	183	11
Motors ..	..	..	..	..	..	..	..
Sailing ..	..	..	..	..	..	..	..
Fishing ..	..	..	..	..	..	..	..
Total Foreign	501	766,159	36	501	191	183	11
Coastwise :—							
Steamers	6,597	2,820,594	2	1,171	306	300	..
Motors ..	..	..	..	..	..	..	..
Sailing ..	4	318	..	..	..	..	..
Fishing ..	..	..	..	..	..	..	..
Non-Trading:							
Steamers	144	90,768	..	..	..	..	..
Sailing	1	50	..	..	..	..	..
Total Coastwise	6,746	2,911,730	2	1,171	306	300	..
Total Foreign and Coastwise	7,247	3,677,889	38	1,672	497	483	11

II. Character of Trade of Port.

TABLE B.

(a) Passenger Traffic during the year.

INWARDS

Alien	1,522	.. Including 63 First Class, 171 Second Class, 786 Third Class, and 502 Tourist.
British	5,721	.. Including 315 deported from Canada, 39 deported from U.S.A., 10 repatriated at expense of Canadian Government, and 8 repatriated at expense of U.S.A.
Total	7,243	

OUTWARDS :	Alien	British.	Total.
	1,521	3,360	4,881

These figures do not include Cross Channel services with England and Scotland.

(b) Cargo Traffic.

Principal Imports.—Maize, wheat, timber, flax, ores, paper, pulp, hemp, iron, steel, slates, coal, cement, fertilizers, oils, flour, bran, oats, tobacco (leaf), glass, salt, fruit (fresh and dried), vegetables and wines.

Principal Exports.—Machinery, ropes, linen, yarn, grass-seed, potatoes, tobacco, butter, eggs, pork, poultry, apples, herrings, whiskey, aerated waters and live cattle.

(c) Ports from which vessels arrive, excluding Great Britain.

Abadan 3, Adelaide 3, Ahktery 1, Alexandria 6, Almeria 1, Amsterdam 5, Antwerp 32, Arkangel 9, Ballina 1, Baltimore 9, Baton Rouge 3, Baytown 3, Bergen 1, Bona 3, Bremen 2, Boston 1, Borga 2, Buenos Ayres 6, Capetown 2, Castillon 1, Carthagena 1, Constanza 7, Cusacoa 1, Delfzyl 1, Dublin 9, Dubrovnik 1, Dunkirk 1, Durban 1, Freemantle 2, Galway 3, Genoa 1, Geraldton 2, Ghent 47, Gifle 2, Gothenborg 23, Hamburg 45, Hango 4, Heulva 1, Helingsfors 1, Houston 1, Jaffa 1, Kotka 7, Killybegs 1, Las Palmas 1, La Plata 2, Leghorn 6, Leningrad 11, Limerick 1, Lisbon 1, Malaga 2, Marseilles 1, Montreal 15, Murmansk 4, Naples 2, Newport 1, New York 9, New Orleans 7, Nord Malling 1, Passboro' 1, Patras 1, Pictou 1, Pomeran 2, Port Pierre 1, Port Lincoln 1, Portland O. 1, Pugwash 1, Rangoon 4, Raumo 4, Revel 1, Riga 23, Remouski 1, Rosario 34, Rotterdam 46, Rouen 3, San Nicolas 7, San Pedro 1, San Lorenza 3, San Francisco 1, Sfax 1, Shoghall 1, St. John's 6, Sundsvall 8, Sydney 8, Texas 1, Thevenach 1, Valencia 3, Vancouver 5, Viborg 1, Villa Constitution 1, Waterford 2, Walleroo 2, Walkon 1, Xpelea 2.

The nationality of the vessels which arrived was as follows :—American 27, British 1,497, Danish 2, Dutch 45, Finnish 12, German 27, Greek 12, Hungarian 1, Italian 5, Japanese 3, Latvaine, 4 Norwegian 21, Portuguese 2, Spanish 3, Swedish 9, Jugo Slav 2.

III. Source of Water Supply.

All water used at the port is supplied by the Belfast and District Water Commissioners who have mains and hydrants on all quays and wharves. Two men are constantly employed by them to supply water to vessels in dock. Their are no water boats at the port.

IV. Infectious Diseases.

(1) Arrangements for Detection of Infectious Disease on Inward Vessels.

Vessels entering the port are hailed by officers of H.M. Customs at the Boarding Station, who, if they obtain information of sickness on board, immediately communicate with the Port Medical Officer. Vessels from infected ports or vessels on which infectious disease exists at the time of arrival or has existed during the voyage are boarded by the Port Medical Officer.

(2) Arrangements for Notification to the Port Sanitary Authority of the Arrival of Inward Vessels requiring Special Attention.

By arrangement, the agents of inward bound vessels transmit to the Port Sanitary Authority information which they receive by wireless of vessels requiring special attention. Information is also received from H.M. Customs Officers who hail the vessels on arrival and before berthing and who, if necessary cause any vessel to be moored at the mooring station, pending the arrival of the Port Medical Officer.

(3) What Vessels are Boarded on Arrival, by whom, where, how.

All vessels which arrive from foreign ports are boarded as soon after arrival as possible by the Port Sanitary Officer, who enquires as to whether there is any sickness on board or whether any sickness occurred during the voyage. In cases where sickness exists or had existed during the voyage the Port Sanitary Officer communicates immediately with the Port Medical Officer. If a wireless message has been received before the arrival of a vessel intimating that all on board are well the vessel is allowed to proceed to her berth, where she is boarded by H.M. Customs Officers, the Port Medical Officer, if present, or the Port Sanitary Officer. The boarding is usually effected by means of a rope or other ladder, let over the side of the vessel.

Arrangements for Disposal of Cases of Infectious Disease, and for Observation or Surveillance of Contacts.

All infectious cases are taken by ambulance to Purdysburn Fever Hospital, Purdysburn, or Union Fever Hospital, Lisburn Road and Small-pox patients to the Small-pox Hospital, Purdysburn. Contacts of infectious disease arriving at the port are kept under observation for a period corresponding to the incubation period of the particular disease. Contacts arriving, but proceeding further, have the addresses taken to which they are proceeding, when the medical officers of the districts are notified by the Port Medical Officer, so that surveillance can still be carried out.

Arrangements for the Disinfecting of Infected Quarters, Bedding, Clothing, etc.

The disinfection of the vessel after the removal of an infectious patient is carried out by the Port Sanitary Officer. The infected quarters are sprayed with a solution of formalin 4½% strength, and the clothing, bedding, etc., are removed to the disinfecting station, Laganbank Road, for disinfection.

Arrangements for the Cleansing of Persons.

The cleansing of persons is carried out at the Disinfecting Station, Laganbank Road, where baths and attendants are provided for each sex.

Arrangements for Ambulance Transport.

The motor ambulances attached to Purdysburn Fever Hospital, and the Union Fever Hospital are available for infectious cases. The motor ambulance of the Belfast Corporation is available for non-infectious cases.

Arrangements for the detection and treatment of Venereal Disease amongst Sailors.

Inquiries as to the existence of Venereal Disease are made by the Port Sanitary Officer. Cards giving information of the facilities available for treatment and hours of attendance are left with the officers and crews. Treatment at the various clinics is free to the patients.

Arrangements for Bacteriological Examination of Rats.

The Bacteriological examination of rats from the port is carried out by the City Bacteriologist at the Municipal Laboratory, Queen's University. During the year 284 rats were examined for possible plague infection. None were found to be infected.

TABLE C.

Cases of Infectious Sickness landed from vessels.

Disease.	No. of Cases during 1932.		No. of Vessels concerned.	Average Number of Cases for previous 5 years.
	Passengers.	Crew.		
Malaria	..	..	..	1
Influenza	..	2	2	..
Tuberculosis	2	..	2	1
Typhoid	..	..	..	..
Diphtheria	..	..	..	..
Scarlet	..	..	..	..
Measles	2	..	2	1
Chickenpox	2	..	2	1
Whooping Cough ..	..	..	..	1
Pneumonia	..	..	..	1

TABLE D.

Cases of Infectious Sickness occurring on vessels during the voyage but disposed of prior to arrival.

Disease.	No. of Cases during 1932.		No. of Vessels concerned.	Average Number of Cases for previous 5 years.
	Passengers.	Crew.		
Influenza	..	2	2	3
Malaria	..	..	..	1
Pneumonia	..	1	1	..
Diphtheria	..	..	..	..

No cases of Cholera, Plague, Yellow Fever, Smallpox or Typhus Fever occurred and no plague infected rats were discovered during the year.
and no plague infected rats were discovered during the year.

Parrots (Prohibition of Import Regulations, 1930).

A notice was served on the Master (Captain Paxton) of the s.s. Duke of Argyle, Heysham steamer, under the above regulations forbidding the import of a Cockatoo which was to be exhibited for trade purposes. This bird was sent back to Buxton same evening from where it had been dispatched.

Two love birds arrived and were admitted on permits issued by the Ministry of Home Affairs, Northern Ireland, per Heysham and Liverpool boats respectively.

Notices were served on the Masters of five vessels arriving from foreign ports namely., s.s. Barrhill, s.s. Amaraporra, s.s. Podmladak, s.s. Capetown Manu, and s.s. Dalcairn, forbidding the landing of birds of the parrot species. Four of these birds were subsequently exported when the vessels sailed from this port. The fifth was destroyed on board the s.s. Podmladak in the presence of an officer of H.M. Customs and the Port Sanitary Officer, the body afterwards being disposed of in the furnace.

V. **Measures Against Rodents.**

(a) In ships in port.—All vessels arriving from ports where Plague is endemic are boarded by the Port Sanitary Officer as soon as possible after berthing. Inquiries are made as to any sick or dead rats having been found during the voyage. The vessels are inspected to ascertain the probable rat population on board and periodically inspected during the time they remain in port, to ascertain if any dead rats have been found in the cargo. Traps are set with a view to obtaining samples for bacteriological examination ; such rats as are caught being sent to the Municipal Laboratory for examination by the City Bacteriologist.

(b) On quays, wharves and warehouses.—Instructions are given to the owners and employees on the quays, etc., that rats caught or killed should be preserved in air-tight tins for the Port Sanitary Officer who arranges for them to be sent to the Municipal Laboratory for bacteriological examination.

Measures taken to prevent the passage of rats between ship and shore.

Rat guards are affixed to all moorings of vessels which come from foreign ports, and remain so fixed during their stay in port. If the rat population is estimated to be abnormal all gangways and communications to the shore are lifted at night. A light is also placed on the gangway.

Methods of Deratisation of Ships.

Deratisation of ships is carried out by fumigation with Sulphur Dioxide or Hydrocyanic Acid Gas. The fumigations are carried out by private firms under the supervision of the Port Sanitary Officer. In fumigating with sulphur, the requisite quantities are placed in the different parts of the vessel, allowing 3 lbs per thousand cubic feet. Sulphur Dioxide Gas is generated by burning the sulphur, tinder sticks and wood wool saturated with methylated spirits or paraffin being used to start combustion. The minimum time of exposure is six hours. During the year no vessels were deratised with Hydrocyanic Acid Gas.

Methods of Deratisation of premises in the vicinity of docks, quays, etc.

This is undertaken by the shipping companies, warehousemen and occupiers of the premises at the request of the City Sanitary Officers or Port Sanitary Officer. If necessary notices are issued under the Rats and Mice Destruction Act and served on the occupiers of the premises. Cats are kept in most of the stores and warehouses. Trapping and poisoned baits are also employed.

During the year the Belfast Harbour Commissioners had men engaged putting down poisoned baits in the sheds and on the lands under their jurisdiction, with very effective results.

Measures taken for the Detection of Rats in Ships and on Shore.

In ships.—Vessels arriving in port are inspected by the Port Sanitary Officer to ascertain if infested with rats and to arrive at an estimate of the extent of such infestation. This is done by taking into account the number of droppings (whether old or fresh) and by tracing runs on decks and beams, cuttings and soiled woodwork, etc., another indication of the presence of rats is the odour given off in confined places which arises when rats have been present for any length of time.

On shore.—Stores in the vicinity of the docks are inspected regularly for the detection of rats' droppings, and cuttings and damaged produce are the main indications that rats have gained access to the premises.

Rat Proofing.

(a) To what extent are docks, wharves, warehouses, etc., rat proof.

(b) Action taken to extend rat proofing : (I) in ships ; (II) on shore.

(a) The wharves on the County Antrim side of the port are all constructed to be as near rat proof as possible. The roadways and floors of the sheds and warehouses are laid with granite setts, laid on concrete. The wharves on the County Down side are mostly constructed on piles which afford a certain amount of harbourage for rats. These wharves are principally used for the discharge of coal, ores, iron and steel, for shipbuilding, etc. The offices in the sheds are constructed so as to reduce rat harbourage to a minimum.

(BI).—In ships.—Efforts are directed towards sealing vulnerable places, such as provision storerooms and pantries where food is kept. This is generally done by encasing with sheet metal, and by closing with sheet metal the means of access of rats between one apartment and another so as to make them as ratproof as possible.

(BII).—On shore.—The officers of the Sanitary Authority see that all stores are kept clean, and that no accumulations are allowed to collect which would entice rats. Where necessary the owners or occupiers are required to take such action as may be necessary to reduce rat harbourage and prevent access of rats to their premises.

The owners and occupiers of premises are aware of the damage done by rats to merchandise and take every possible means accordingly to keep clear of them.

Number of Rats Destroyed during the year.

TABLE E.

(a) **On Vessels.**

Species.	Jan.	Feb.	Mar.	Apl.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Black ..	9	11	40	38	11	6	46	..	6	..	16	6	189
Brown ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Species not recorded ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Examined ..	9	4	21	32	..	2	44	..	6	..	16	6	132
Infected with Plague ..	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE F.

(b) In Docks, Quays, Wharves, Warehouses.

Species.	Jan.	Feb.	Mar.	Apl.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Black ..	22	28	100	1	49	18	6	..	10	14	28	26	302
Brown ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Species Not recorded	..	..	..	..	..	..	..	..	..	..	..	..	..
Examined ..	..	1	75	1	19	10	2	..	..	4	20	20	152
Infected with Plague	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE G.

Particulars relating to Plague " Infected " or " Suspected " Vessels arriving in 1932.

Name of Vessel.	Date of Arrival.	Whether " Suspected " or " Infected."	Method of Rat Destruction.	Number of dead Rats recovered.	Whether a Certificate of Deratisation issued.	Remarks.
..	..	..	..	..	..	..

TABLE H.

Measures of Rat Destruction on Vessels from Plague Infected Ports arriving in the port during the year 1932 and number of certificates issued in respect of such vessels.

Total number of Vessels arriving from from Plague Infected Ports.	Number of such Vessels fumigated with S.O2.	Number of Rats killed.	Number fumigated by H.C.n.	Number of Rats killed.	Number of Vessels on which trapping. Poisoning, &c., were employed.	Number of Rats killed.	Number of such Vessels on which measures of Rat destruction were not carried out.	Number of Fumigation Certificates issued.		Number of other Certificates.
								Deratisation.	Exemption.	
16	1	6	None.	None.	1	None.	12	1	2	None.

TABLE I.

Measures of Rat Destruction on Vessels (other than those included in Tables G. and H.) and number of certificates issued in respect of such vessels during 1932.

Number of Vessels fumigated by S.O2.	Number of dead Rats recovered.	Number of Vessels fumigated by H.C.n.	Number of dead Rats recovered.	Number of Vessels on which Trapping, Poisoning, &c. were employed.	Number of dead Rats recovered.	Number of Certificates issued on Form Port II.		Number of other Certificates.
						Deratisation.	Exemption.	
11	54	None.	None.	15	129	11	26	None.

VI. **Hygiene of Crew's Spaces.**

TABLE J.

Classification of Nuisances.

Nationality of vessels.	Number Inspected during 1932.	Defects of original Construction.	Structural defects through wear and tear	Dirt, Vermin, and other conditions prejudicial to health.
British ..	1,497	3	8	489
Foreign ..	175	2	24	136

VII. **Food Inspection.**

During the year all sheds were inspected regularly for the detection of unsound food. The quality of the perishable goods which arrived was of a very good standard, but the quantity which arrived was very much reduced compared with previous years, probably this is accounted for by the imposition of duties under the Import Duties on toreign goods.

Seizures.

	T.	C.	QRS.	LBS.
120 Crates of Dutch Lettuce ..	—	17	—	0
45 Boxes Tasmanian Apples ..	1	4	0	0
1 Bag of Veal	—	2	0	0
	2	3	0	0

TABLE XXIX.

SANITARY REPORT FOR THE YEAR.

DISPENSARY DISTRICTS.

	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.	XV.	XVI.	TOTAL.
Houses Inspected :— ..																
Systematically	1190	4510	2667	2189	1508	1675	..	63	3075	2726	2938	2415	1817	1871	1132	29776
Re-inspections	3115	6600	6164	3589	2642	3738	144	371	6768	5385	5154	5012	2321	5397	3474	59874
For Specific Purposes	1391	2561	2424	1488	1266	1665	74	123	3103	2073	2659	1845	1428	1506	1798	25404
Where Infectious Diseases occurred ..																
Inspections	41	289	238	165	64	136	15	37	154	174	320	186	167	67	153	2206
Re-inspections	104	682	310	141	73	126	16	48	127	210	224	139	124	50	103	2477
Under the Tuberculosis (Prevention) Act																
Inspections	15	73	82	50	24	37	1	6	44	51	43	29	19	31	28	533
Re-inspections	1	4	1	2	..	1	..	..	..	1	2	1	1	..	1	15
Factory and Workshops Acts :— ..																
Factories																
Inspections	125	51	32	28	30	24	..	..	13	4	32	27	61	97	22	546
Nuisances	46	17	18	7	9	1	..	..	5	1	11	7	17	37	3	179
Workshops																
Inspections	389	296	247	129	86	113	4	8	50	97	158	120	172	162	75	2106
Nuisances	112	56	41	27	20	15	..	1	2	14	28	16	17	41	23	413
Workplaces																
Inspections	164	40	10	12	14	27	1	1	5	5	8	10	12	45	20	374
Nuisances	20	2	..	5	1	3	..	..	..	..	2	1	2	2	2	40
Outworkers' Premises																
Inspections	25	157	145	893	37	608	..	..	81	5	773	618	175	162	549	4228
Nuisances	6	20	18	129	4	74	..	..	12	1	112	76	14	21	74	561
Bakehouses																
Inspections	66	113	119	83	40	81	..	3	45	49	124	73	73	62	45	976
Nuisances	20	39	43	38	14	36	..	..	15	15	33	17	21	15	11	317

SANITARY REPORT (Continued).

	DISPENSARY DISTRICTS.															
	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.	XV.	XVI.	TOTAL.
Shops Inspected by F.S.S.O., including :—																
Confectionery	282	569	461	281	278	163	42	46	202	414	243	274	112	373	220	3960
Ice Cream	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Vegetable and Fruit	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Grocery ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Others	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Schools :—																
Inspections	111	281	297	79	131	85	42	29	119	107	213	110	107	150	75	1936
Common Lodging Houses :—																
Inspections—Day	1023	449	4	81	531	14	..	..	..	..	..	2	..	463	134	2701
,, Night	..	4	..	..	4	..	..	..	..	..	..	..	..	..	..	8
Breaches of Bye-Laws	127	46	..	..	41	..	..	..	..	..	..	1	..	23	3	241
Nuisances	43	18	..	..	30	..	..	..	..	..	..	..	..	21	3	115
Under the Dairies, Cowsheds and Milkshops Order																
Cowsheds																
Inspections	..	11	3	29	2	47	8	88	78	8	29	11	25	17	..	356
Milkshops																
Inspections	214	502	618	239	163	197	..	17	215	320	318	217	134	237	124	3515
Under the Bye-Laws for the Regulation of Offensive Trades :—																
Inspections	18	..	..	42	..	188	..	..	..	..	..	..	6	135	234	623
Tipping Grounds :— ..																
Inspections	48	48	..	38	..	64	51	48	143	119	145	..	167	..	..	871
Black Smoke :—																
Observations made	..	17	18	40	36	28	..	8	54	49	53	19	18	39	17	396
Graveyards :—																
Inspections	..	49	..	38	..	72	12	..	4	11	..	13	7	..	1	207
Marine Stores :—																
Inspections	53	95	94	..	28	..	..	..	..	..	..	..	..	126	41	437
Public Urinals :—																
Inspections	734	148	162	190	192	361	50	196	327	148	48	72	12	169	226	3035
Nusiances	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2

SANITARY REPORT (continued).

	DISPENSARY DISTRICTS.															
	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.	XV.	XVI.	TOTAL.
Amusement Halls :—																
Inspections	438	195	47	120	143	..	1	..	..	..	48	33	..	137	84	1246
Rivers :—																
Inspections	..	21	..	..	9	..	19	8	21	34	18	..	10	..	..	140
Drain Tests—																
Requests	2	1	1	..	..	4	..	..	..	..	..	..	3	..	..	11
Defective	..	..	..	..	..	3	..	..	..	..	..	..	1	..	..	4
New Work	3	12	..	..	1	1	..	..	2	..	2	..	1	3	..	25
Defective	..	1	..	..	..	..	..	..	..	..	..	..	..	2	..	3
Typhoid Fever	..	3	2	3	1	..	1	..	2	..	2	..	..	..	1	15
Defective	..	1	..	1	1	..	..	..	..	..	..	..	..	..	..	3
Diphtheria	..	2	..	..	..	..	..	..	..	..	1	..	1	..	..	4
Defective	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Continued Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Defective	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Schools	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Defective	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Others	10	44	34	5	9	13	2	..	12	6	23	9	28	7	9	211
Defective	5	17	20	4	6	6	1	..	5	3	17	7	17	3	4	115
Total No. of Tests	15	62	37	8	11	18	3	..	16	6	28	9	33	10	10	266
,, Defects	5	19	20	5	7	9	1	..	5	3	17	7	18	5	4	125

SANITARY REPORT (continued).

DISPENSARY DISTRICTS.

A.—Discovered. B.—Complained of.	I.		II.		III.		IV.		V.		VI.		VII.		VIII.		IX.		X.		XI.		XII.		XIII.		XV.		XVI.		TOTAL.	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Nuisances Discovered and Complained of :—																																
Drains, Traps, &c., Foul or Defective ..	124	66	277	101	161	106	181	66	90	54	284	84	8	3	6	2	149	61	73	54	111	82	144	63	141	57	152	66	179	97	2080	962
Tiling, Paving or Flooring Defective ..	168	77	537	141	324	180	281	134	187	84	255	111	8	2	10	18	462	97	345	143	420	155	496	125	188	47	433	97	372	99	4486	1510
No Water Closet Accommodation ..	2	..	1	..	..	1	3	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	3	..	1	..	4	1	1	..	16	4
Water Closets Foul or Defective ..	136	64	329	125	240	154	197	113	92	50	139	92	3	6	3	5	299	96	192	107	186	138	255	130	125	47	308	67	208	108	2712	1302
No Ashpit Accommodation	28	8	11	7	5	15	279	11	2	1	248	9	1	1	3	..	8	2	54	6	281	9	89	8	93	3	38	2	39	3	1179	85
Ashpit Defective Dilapidated or Unsuitable	151	10	493	26	289	48	87	24	88	15	71	25	5	..	34	3	321	10	281	17	286	40	395	31	124	16	169	20	89	21	2883	306
Sink Waste Pipes Defective, or want of ..	14	3	57	16	30	23	22	13	7	7	23	20	1	..	3	2	36	13	24	5	29	19	42	12	29	7	54	9	10	4	381	153
Soil and Ventilation Pipes Defective ..	2	..	3	..	1	..	1	..	1	..	4	..	1	..	..	..	1	..	1	1	1	1	..	..	1	..	3	..	1	..	21	2
Roof or Spouting Defective or want of ..	285	80	880	176	571	269	251	120	349	126	266	121	5	5	35	15	725	111	491	141	343	129	372	129	168	47	366	135	305	157	5412	1761
Premises Dirty	47	10	94	11	39	26	4	6	6	14	3	4	1	1	..	4	3	8	6	3	6	10	2	15	3	4	7	13	1	15	222	144
House or Premises Damp	68	80	123	173	114	248	129	137	99	139	158	90	..	3	1	21	122	99	74	168	193	125	223	132	114	46	196	128	193	121	1807	1710
General Dilapidation	..	7	..	2	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	1	..	..	..	3	..	15
Insufficent Light or Ventilation ..	..	3	4	4	12	6	2	..	5	5	6	3	..	..	..	..	9	..	4	5	1	4	2	2	1	1	4	2	2	3	52	38
Offensive Smells	3	21	4	29	3	37	14	19	2	14	2	30	..	3	..	..	4	14	18	20	8	33	3	11	8	20	1	18	4	15	74	284
Fowl or Animals Kept	1	3	1	2	2	5	..	4	..	1	..	6	..	..	..	1	..	2	1	2	1	7	1	2	3	4	1	2	1	..	12	41
Accumulation of Manure or other Offensive Matter	31	13	32	32	38	38	18	31	11	12	33	31	5	2	..	1	42	12	16	8	22	44	30	16	13	25	24	24	10	8	325	297
No Domestic Water Supply, or Improper ..	4	..	1	7	..	5	1	1	2	1	1	4	..	..	..	4	15	3	2	1	1	7	2	32	..	3	..	2	7	6	36	76
Black Smoke	..	..	..	..	..	..	..	..	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Passages Dirty	1	5	8	11	16	32	9	11	..	9	3	17	..	..	1	..	7	10	2	9	3	7	19	14	6	3	7	8	5	5	87	141
Schools Dirty	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	3
,, Overcrowded	41	..	91	..	121	..	30	..	57	..	10	..	30	..	12	..	93	..	55	..	44	..	35	..	24	..	107	..	10	..	760	..
Houses ,, ...	6	11	4	10	..	13	..	5	1	5	..	5	..	1	..	2	1	8	..	8	..	3	1	..	..	..	1	7	1	6	15	84
Offensive Privies	..	..	..	..	2	..	..	1	..	..	..	1	..	..	..	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	8	2
Miscellaneous	257	205	602	316	410	437	242	281	236	193	348	207	8	10	15	30	705	213	387	271	470	293	464	229	263	91	511	276	370	244	5288	3296

SANITARY REPORT (continued).

DISPENSARY DISTRICT.

	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.	XV.	XVI.	TOTAL.
House Drains Cleansed	187	335	227	203	131	359	8	8	146	97	173	155	173	200	228	2630
„ Repaired	5	25	19	6	6	12	1	1	28	27	6	6	11	12	13	178
Length in feet of Pipe Drain Laid in Providing Houses with New Drains	273	536	421	253	391	583	114	8	476	1	..	162	471	142	30	3861
Gully and Disconnecting Traps put on House Drains	6	19	3	13	2	18	7	..	1	..	..	..	5	8	1	83
Houses had the Tiling, Paving, or Flooring Repaired	240	589	477	355	262	295	9	27	545	475	454	561	212	555	406	5462
Water Closets Erected	2	4	..	..	17	3	..	..	6	..	..	..	..	1	1	34
„ Repaired	187	388	360	247	131	148	6	6	366	294	275	408	194	382	264	3656
Ashbins Provided	118	415	284	397	102	312	7	38	331	365	501	216	165	217	146	3614
Houses Provided with New Sinks ..	1	6	6	2	..	1	..	..	2	..	4	..	..	51	..	73
Houses Provided with New Soil and Ventilation Pipes	1	..	..	1	..	1	1	..	6	..	..	..	1	1	..	12
Houses have had the Roofs Repaired ..	207	578	549	330	239	189	4	18	528	356	235	335	120	333	319	4340
Houses have had the Spouting Repaired ..	153	462	287	148	202	146	6	11	362	269	280	202	98	220	160	3006
Houses have been Cleansed or Whitewashed ..	10	15	17	1	7	..	..	2	4	2	4	..	2	1	5	70
Houses have had the Yard Walls Limewashed	29	88	32	..	..	..	..	..	..	..	..	..	..	..	..	149
Houses (that were overcrowded) had the Number of Inmates Reduced	7	3	3	1	1	..	..	..	1	..	1	..	..	2	2	21
Houses Closed	8	..	..	..	..	..	..	..	..	..	..	..	..	1	..	9
Houses have had Minor Repairs Effected ..	477	913	883	439	457	481	14	35	1090	634	767	766	402	974	617	8949
Miscellaneous Nuisances Abated	81	306	296	83	38	76	5	6	105	76	147	144	94	78	102	1637

TABLE XXX.

INQUEST CASES.

Cause of Death.	Under 1 year.		1 and under 5 years.		5 and under 15 years.		15 and under 25 years.		25 and under 45 years.		45 and under 65 years.		65 and upwards.		Total.		Grand Total.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Accidents—Motor	..	..	4	2	6	2	8	..	6	2	5	1	6	2	35	9	44
,, Other.	..	..	3	1	1	..	1	1	11	1	7	4	3	2	26	9	35
Cause of Death Unknown	4	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	4
Drowning	..	..	..	..	..	..	1	..	1	..	4	..	..	..	6	..	6
Gunshot Wounds	..	..	..	..	..	..	1	..	3	..	..	1	..	..	4	1	5
Gas Poisoning	..	..	..	..	..	..	..	..	..	..	1	..	1	1	2	1	3
Heart Failure	..	..	..	..	..	..	..	..	3	2	6	2	5	2	14	6	20
Inattention at Birth	2	2	..	..	..	..	..	..	..	..	..	..	..	..	2	2	4
Natural Causes	2	..	..	..	..	1	..	..	2	..	1	..	1	..	6	1	7
Overlying	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
Poisoning (Lysol)	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1
Shock due to Burns, etc.	3	2	4	4	2	..	2	4	..	..	..	3	1	..	12	13	25
Stillborn	2	1	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3
Suicide	..	..	..	..	..	..	2	2	6	3	14	1	3	2	25	8	33
Suffocation	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
															139	54	193

THE HYGIENE OF BELFAST PUBLIC SWIMMING BATHS.

The importance of the sanitation and hygienic control of public swimming baths cannot be overestimated, since there is a possibility of danger resulting from the use of the bathing pools by persons suffering from infectious diseases. Fortunately, the methods at our disposal for the scientific purification of swimming pond water have reached a high stage of perfection and we are able to maintain the bacteriological purity of the water at a safe standard even during the time when the pools are more or less crowded.

According to Houston most of the disease producing bacteria do not survive long in water ; unfortunately, intestinal bacteria are able to survive for a much longer period, and it is usual to take the intestinal organism—Bacillus Coli—as the indicator as to the stage of purity of the water. Since, however, bacteria flourish in water which contains organic impurities, a bacterial count will give an indication as to the amount of such impurities. Some bacteriologists make use of the occurrence of Streptococci as an indicator of the impurity of the water.

With regard to the standards of bacteriological purity we have adopted those of the U.S.A. Commission, viz., " not more than two out of five 10 c.c. samples collected on the same day shall show a positive presumptive test for B. Coli, and not more than ten per cent of samples covering any three months' period shall contain more than 500 bacterial colonies per cubic centimetre when incubated for 24 hours at 37°C. on an agar or litmus lactose agar medium."

In a report on " The Hygiene of Swimming Baths Water with special reference to the Belfast Baths," which I made in October, 1929, to the Baths and Lodging House Committee, I indicated the possible sources of contamination and I made several recommendations with a view to bringing the Belfast Baths up to the standard of modern hygienic requirements. I am pleased to state that the Committee acted upon the recommendations and we have now installed in the three larger baths, namely, Ormeau Avenue, Templemore Avenue and Falls Road up-to-date purification apparatus, and I am also pleased to be able to report that judging by the bacteriological tests these purification plants have given complete satisfaction.

At these baths a continuously circulating system of purification is adopted, the rate of circulation being adjusted to meet the varying bathing load of the swimming pools.

The system at each bath briefly is as follows :—The outlet pipe from the swimming pond is situated at the deepest end and suction piping runs from this point to the flange of a circulating water pump which is fitted with a strainer basket for the retention of coarse suspended particles such as hairs, fibres of clothing etc. The water delivered by the pump is continuously treated with " Alumino-ferric " and soda ash for the coagulation of the organic impurities and the subsequent formation of an artificial " Vital " layer on the surface of the sand filter.

Two types of sand filters are in use (a) Royle's patent and (b) The " Turnover " filter. Both of these filters give satisfactory results in filtration. The filtered water is aerated in an enclosed type aerator, and before delivery to the pond it is chlorinated by the continuous application of Chlorine from a Chlorinometer ; the chlorine is applied at such a rate as to give .2 parts of free chlorine per million parts of water in the pond. The chlorine content of the water can easily be estimated by a colorimeter test, orthotolidine being used as the indicator. The reaction of the water is also easily controlled by frequent testing with Methyl Orange.

Whilst satisfactory results can be obtained in the purification of swimming ponds the supervision of the bathers is of great importance and should not be overlooked. No person should be allowed to use the baths who is suffering from skin eruptions or with open wounds or bandages. It cannot be expected that bath attendants will recognise persons suffering from infectious diseases especially Tuberculosis, but it is felt that the risk of infection from these, even if they occasionally made use of the baths, must be somewhat remote.

Foot baths and shower baths for the use of bathers before entering the swimming ponds are very useful and there should not be any great difficulty in insisting that any person who shows obvious signs of dirty feet etc., should have a preliminary foot bath or shower bath as the case demands.

Bathing suits and towels should be made of suitable material and should be thoroughly washed after use as is done in the laundries attached to the Belfast Public Baths.

In view of the increased demand for swimming facilities and the present popularity of public swimming baths I feel that the safety of the bathers from the public health point of view should be safeguarded by the employment of up-to-date purification plants at all public baths, and in this connection I am hopeful that similar plant will be installed at the Peter's Hill Public Baths in the near future.

CITY AND COUNTY BOROUGH OF BELFAST.

TUBERCULOSIS DEPARTMENT.

THE YEAR'S WORK,

BEING

THE REPORT

OF THE

Chief Tuberculosis Officer

FOR THE

Year ended 31st December, 1932.

LORD MAYOR :

The Right Honourable SIR CRAWFORD McCULLAGH, D.L., J.P.

MEMBERS OF THE TUBERCULOSIS COMMITTEE (1932).

Councillor W. A. COCHRANE, J.P., Chairman.

Councillor CLARKE SCOTT, Deputy Chairman.

Alderman W. H. ALEXANDER.
Alderman ROBERT PIERCE.
Alderman CAPTAIN W. REID, J.P.,
(Resigned 1932).
Alderman J. D. WILLIAMSON, M.D., J.P.
Councillor J. BOYLE.
Councillor MRS. COLEMAN.
Councillor R. J. GROVES.
Councillor Lt. Com. R. M. HARCOURT.
Councillor JAS. HOLLAND.

Councillor M. HOPKINS, J.P.
Councillor S. KYLE.
Councillor DR. H. P. LOWE.
Councillor M. McKIBBIN.
Councillor W. P. NOBLE,
(Died 27/10/32).

(Co-opted Members)

MR. KYLE M. ALEXANDER, F.L.A.A.
MISS E. McCOMB.
MR. JAMES PARKHILL, J.P.

MEDICAL OFFICERS OF THE DEPARTMENT.

Tuberculosis Institutes.

Chief Tuberculosis Officer ..	DR. ANDREW TRIMBLE.
Assistant Medical Officer ..	DR. JAMES SHAW.
Assistant Medical Officer ..	DR. T. R. V. IRWIN.
Assistant Medical Officer ..	DR. HERBERT McMASTER.
Assistant Medical Officer ..	DR. E. P. DEWAR.

Municipal Sanatorium, Whiteabbey.

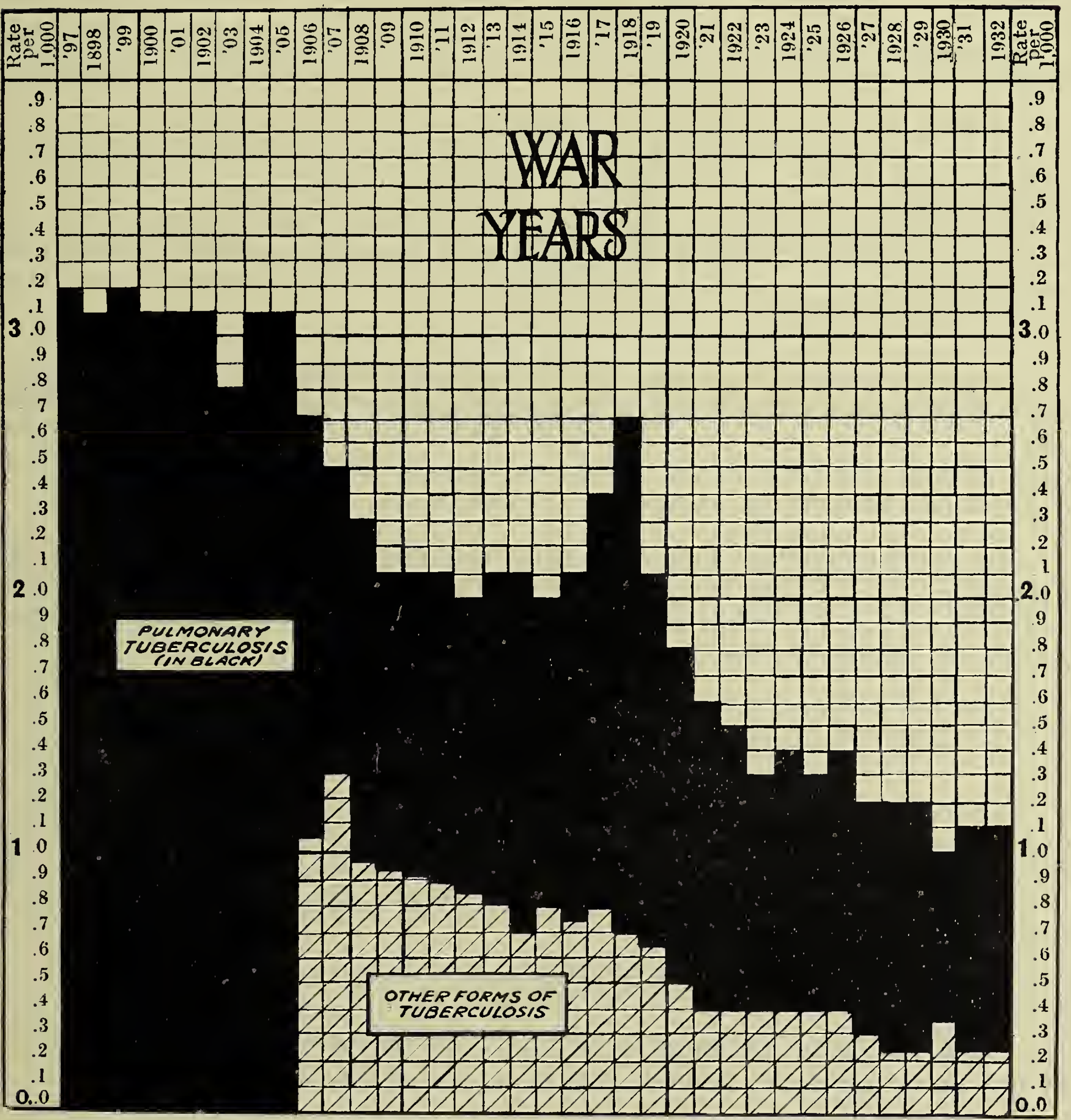
Resident Medical Superintendent ..	DR. PERCY WALKER.
Assistant Medical Officer ..	DR. D. K. WATTERSON.
Assistant Medical Officer ..	DR. A. E. LAVELLE.
Visiting Medical Officer ..	DR. JOHN RANKIN.

Municipal Hospital for Tuberculous Children, Graymount.

Visiting Surgeon ..	MR H. P. MALCOLM.

CHART 1.

SHOWING THE COURSE OF THE DEATH RATE FROM PULMONARY TUBERCULOSIS IN BELFAST FROM 1897 ONWARD, AND FROM THE NON-PULMONARY FORMS OF TUBERCULOSIS, FROM 1906 ONWARD.



REPORT OF THE CHIEF TUBERCULOSIS OFFICER

ON THE WORK OF

THE TUBERCULOSIS DEPARTMENT

For the Year ended 31st December, 1932.

Mr. Chairman, Ladies and Gentlemen.

Herewith I submit my Annual Report for the year ended 31st December, 1932.

The Department owes a debt of gratitude to the Belfast Council of Social Welfare, and to those Social Service Societies which have worked through the Council during the year. In saying " Good-bye " with regret to Miss McCrea, their capable Secretary for many years, we welcome Miss Mackintosh, the new Secretary, and would express to her our thanks for the sympathetic assistance extended to many patients in necessitous circumstances during the very trying winter through which we have passed.

Our grateful thanks are also due to the British Legion for the valuable assistance which they rendered in relieving distress amongst discharged service members and their families, and to the Honorary Secretaries of the Coal Relief Fund for their patient attention to our numerous appeals for supplies of free coal for tuberculous patients in straitened circumstances.

To the Belfast Poor Law Guardians, and their efficient and courteous Staff I tender my very sincere thanks for their unfailing help, both in relieving distress and in receiving for urgent treatment patients whom it was impossible for any reason to admit to the Corporation's Institutions.

CALCULATION OF RATES.

Throughout this Report, the various rates are calculated on the census figures of 1926, as the Registrar General does not now issue " estimated " figures for each succeeding intercensal year. The actual population figures for Belfast, on which the rates in this Report are based are, therefore, 195,539 males and 218,612 females.

NEW EXAMINATIONS.

Table 1.—Shows the number of persons examined for the first time, in each of the years indicated, without regard to sex or diagnosis.

Year ended	Number of Examinations.
31st December, 1929	1805
31st December, 1930	1638
31st December, 1931	1894
31st December, 1932	**1880**

Table 2.—Shows the result of examination of new patients examined during the years indicated.

Year ended	Tuberculous	Suspect	Non-Tuberculous	Total
31st December, 1929 ..	1032	117	770	1919
31st December, 1930 ..	881	120	724	1725
31st December, 1931 ..	1065	172	744	1981
31st December, 1932 ..	**1008**	**177**	**828**	**2013***
Percentages for year ended **31st December, 1931** ..	**50%**	**9%**	**41%**	**100%**

*includes 124 transfers from patients formerly only suspect, to tuberculous or non-tuberculous.

The figures set out above show a decrease of 57 in the numbers found to be suffering from tuberculosis, as compared with the year 1931.

CONTACTS.

Table 3.—Shows the number and result of examination of Contacts set out as Tuberculous, "Suspect," and Non-Tuberculous.

	Tuberculous	Suspect	Non-Tuberculous	Total
No.	222	38	375	635
Per Cent. ..	35%	6%	59%	100%

With reference to the percentage of contacts (all ages) found to be tuberculous, it may be well to state that almost all the contacts examined had been previously noticed to be ailing, either by the parent, or by the visiting nurse.

SPECIFIC FORMS OF TUBERCULOSIS.

Table 4.—Shows the form of tuberculosis from which each tuberculous patient was found to be suffering, and the sex of the patient so suffering, including old patients formerly "suspect," whose diagnosis was made definite during the year.

Year ended	Pulmonary		Glandular		Osseous		Abdominal		Other Forms		Total		Grand Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
31st Dec., 1929 ..	344	390	79	46	34	37	28	28	26	20	511	521	1032
31st Dec., 1930 ..	270	332	61	52	29	33	29	15	32	28	421	460	881
31st Dec., 1931 ..	206	389	90	72	35	24	23	39	55	32	509	556	1065
31st Dec., 1932	**291**	**360**	**83**	**79**	**29**	**22**	**40**	**35**	**34**	**35**	**477**	**531**	**1008**

A study of the relative numbers of women and men found to be tuberculous at their first examination reveals a diminution in the relative numbers of women during the 18 years of our work. Thus, for every 100 men found to be suffering from pulmonary tuberculosis in the year 1915 we had 150 women similarly affected ; while for every 100 men diagnosed as suffering from tuberculosis in 1932 we had only 123 women. When we come to consider deaths amongst men and women the change is even more noticeable. Thus for every 100 males who died from pulmonary tuberculosis in 1914, 128 females died of the disease ; while in 1932 for every 100 males dying from pulmonary tuberculosis only 98 females died.

We seem to be passing through a similar phase (in regard to the relative incidence of tuberculosis amongst males and females) to that observed in England some thirty years ago, so that it is fair to assume that we shall pass through the same cycle in regard to the death rate, though at a later stage in our experience.

Further, in my opinion, the course of the disease in this country, is becoming more chronic and fibrotic in type—a fact which may explain the lengthening period now observed between the inception of the disease and its termination.

RE-ATTENDANCES OF OLD PATIENTS.

The re-attendances of old patients at the Institutes for examination and treatment numbered 22,589 as compared with 20,716 in the year previous. 163 patients unable to attend the Institutes were re-examined in their own homes, and 84 patients were examined at the Belfast Infirmary by the Medical Staff of the Institutes.

PATIENTS ON THE VARIOUS FORMS OF TREATMENT.

Table 5.—Shows the number of patients on the different forms of treatment at the 31st of December, 1932.

Institute (Dispensary)	Domiciliary		Institutional		Open-Air School (Day Section)	Total
	Ins.	Non-Ins.	Sanatorium.	Graymount Hospital		
2038	2198	1237	273	58	124	5928

These figures include 2,198 insured persons on panel treatment whose supervision devolves upon the Tuberculosis Department in accordance with Par. 47 (b) of the Medical Benefit Regulations which reads :—

A practitioner is required—

> " (b) To prepare and send to the Tuberculosis Officer in regard to each " patient who is recommended by the Tuberculosis Officer to receive " treatment for tuberculosis from the practitioner reports on forms " to be provided by the Tuberculosis Officer and approved by the " Ministry for the purpose, at such reasonable intervals, not exceeding " three months, during the continuance of such treatment as may be " arranged between the practitioner and the Tuberculosis Officer."

The importance of the number of patients on treatment consists not only in the fact that so many patients are under supervision, but that every patient treated is an object lesson to the remainder of the family and the community—serving as a starting point for a spread of the knowledge of the laws of health and of the means that may be utilised for the prevention and treatment of the disease.

RE-EXAMINATION OF PATIENTS ON DOMICILIARY AND PANEL TREATMENT.

In addition to the quarterly reports of Domiciliary Doctors regarding tuberculous patients under their care, a special re-examination of patients on Domiciliary and Panel treatment is made at regular intervals by the medical staff of these Institutes. During the year 1932, 1,314 such special re-examinations were made, with the results set out hereunder :—

Table 6.—Shows the Condition of Domiciliary and Panel patients re-examined during the year.

Year	Disease Apparently Cured	Disease Quiescent.	Greatly Improved.	Improved	In Statu Quo.	Worse	Total
1930	37	92	82	117	483	74	885
1931	52	69	79	177	541	112	1030
1932	**52**	**155**	**77**	**163**	**748**	**119**	**1314**

From this Table it will be seen that tuberculosis is amenable to treatment of a general character, even amongst patients who have never been treated in a sanatorium.

Occupations of Tuberculous Patients at their First Examination (arranged according to the Classification—Slightly Modified—of the Registrar-General).

TABLE 7.

I.—GENERAL, OR LOCAL GOVERNMENT OF THE COUNTRY.

Male.		**Female.**	
Nil.		Nil.	

II.—PERSONS ENGAGED IN THE DEFENCE OF THE COUNTRY.

Sailor (Discharged) ..	2	Nil.	
Soldier (Discharged) ..	29		

III.—PERSONS ENGAGED IN PROFESSIONAL OCCUPATIONS (AND THEIR SUB-ORDINATES).

Chemist ..	2	Nurse ..	2
Professional Footballer ..	2		
Student ..	1		
Telephonist ..	1		

IV.—PERSONS ENGAGED IN DOMESTIC OR PERSONAL OFFICES OR SERVICES

Gardener ..	2	Charwoman ..	5
Gas Inspector ..	1	Companion ..	1
Hairdresser ..	5	General Servant ..	18
Steward ..	1		
Window Cleaner ..	1		

V.—PERSONS ENGAGED IN COMMERCIAL OCCUPATIONS.

Canvasser ..	1	Clerk ..	9
Clerk ..	15	Shop Girl ..	9
Rent Collector ..	1		
Shop Assistant ..	5		

VI.—CONVEYANCE OF MEN, GOODS, MESSAGES.

Male.		**Female.**	
Carter	5	Messenger	1
Messenger	6		
Motor Man	4		
Postman	2		
Porter	4		

VII.—PERSONS ENGAGED IN AGRICULTURE.

Nil.	Nil.

VIII.—PERSONS ENGAGED ABOUT ANIMALS.

Nil.	Nil.

IX.—PERSONS WORKING OR DEALING IN PRINTING, BOOKS, ETC.

Box Maker	1	Book Folder	1
Printer	4		

X.—PERSONS ENGAGED WITH MACHINES AND IMPLEMENTS.

Brass Moulder	1	Nil.
Crane Driver	2	
Driller	3	
Electrician	4	
Engineer	15	
Heckle Setter	1	
Hoist Boy	1	
Holder Up	1	
Iron Dresser	1	
Iron Moulder	5	
Iron Turner	4	
Plater	2	
Plumber	3	
Riveter	3	
Sheet Metal Worker	2	
Shipwright	2	
Stager	1	
Stoker	1	

XI.—PERSONS WORKING AT HOUSES, FURNITURE AND DECORATIONS.

Carpenter	9	Upholsteress	1
Painter and Glazier	3		
Plasterer	1		
Stone Mason	1		
Upholsterer	1		

XII.—CARRIAGES AND HARNESS.

Nil.	Nil.

XIII.—SHIPS AND BOATS.

(See also under X.—"Machines and Implements.")

Nil.	Nil.

XIV.—CHEMICALS AND COMPOUNDS.

Nil.	Nil.

XV.—TOBACCO AND PIPES.

Male.		**Female.**	
Nil.		Match Factory Worker	1
		Tobacco Worker	1

XVI.—FOOD AND LODGINGS.

Baker	1	Baker	1
Barman	2	Confectioner	3
Chef	1	Cook	2
Fruit Dealer	1	Pastry Packer	1
Grocer	2	Waitress	3
Milk Server	3		
Waiter	2		

XVII.—TEXTILE FABRICS

Bobbin Turner	3	Back Minder	1
Flax Dresser	1	Bobbin Sorter	1
Linen Lapper	1	Box Folder	2
Machinist	4	Cloth Finisher	1
Packer	4	Collar Turner	2
Rougher	2	Doffer	17
Warehouse Worker	1	Drawer	8
Yarn Bundler	1	Embroiderer	1
		Examiner	1
		Feeder	1
		Laundress	6
		Layer	3
		Machinist	4
		Netter	1
		Ornamenter	1
		Packer	2
		Piecer	1
		Reeler	10
		Rover	3
		Shirt Maker	1
		Spinner	26
		Spreader	1
		Stitcher	26
		Wareroom Worker	4
		Weaver	14
		Winder	13
		Factory Worker or Mill-worker (not otherwise defined)	5

XVIII.—DRESS, ETC.

Boot and Shoe Maker	1	Cutter	1
Cutter	1	Dressmaker	4
Tailor	5	Tailoress	2

XIX., XX., and XXI.—ANIMAL, VEGETABLE, AND MINERAL SUBSTANCES.

Cattle Drover	1	Nil.	

XXII.—GENERAL OR UNSPECIFIED COMMODITIES.

Caretaker	1	Bag Mender	1
Dealer	3	Housewife	114
Golf Caddy	1		
Labourer	79		
Storeman	2		

XXIII.—REFUSE MATTERS.

Male.	Female.
Nil.	Nil.

XXIV.—PERSONS NOT FOLLOWING PRODUCTIVE OCCUPATIONS.

School Boy ..	147	School Girl ..	145
Male Child under Scool Age	58	Female Child under School Age	36
No occupation .	11	No occupation ..	13
Total Males ..	501	Total Females ..	531

N.B.—24 Discharged Sailors and Soldiers are recorded also under their ordinary calling.

THE QUESTION OF INFECTION.

Table 8.—Shows the possibility of infection by living, or having lived, with other tuberculous persons.

Year ended	Number of Patients who are living, or have lived with one or more definitely tuberculous persons.							
	With 1	With 2	With 3	With 4	With 5	With 6	With over 6	Total
31st Dec., 1930 ..	167	45	21	5	3	2	0	243
31st Dec., 1931 ..	220	81	19	10	0	0	1	331
31st Dec., 1931 ..	**201**	**84**	**24**	**8**	**0**	**1**	**0**	**318**

The foregoing Table shows that of the 1,008 new patients examined during the year, no fewer than 318, or 31.5 per cent. had a definite opportunity of infection through contact with other tuberculous patients. These 318 patients knew of their tuberculous relatives, and admitted the possibility of infection ; but it is only too likely that a considerable number of the new patients examined would be unaware of their contact with the disease, or did not choose to disclose it. It is obvious that improvement of the living conditions of the people—especially in regard to isolation and nursing of the tuberculous patient—is one of the most important factors in the tuberculosis campaign.

The primary source of infection in tuberculosis is the tubercle bacillus in the sputum or other discharge of the tuberculous patient. If this infected sputum or discharge is not carefully disposed of, or if adequate care is not taken by cleansing the knives, forks, plates, spoons, etc. used by the tuberculous patient, the results are certain to be disastrous—especially to the children of the family.

VISITING THE PATIENTS IN THEIR HOMES.

During the year our Staff of Visiting Nurses paid 31,065 visits to patients in their own homes.

As demonstrating the crowded conditions in which some of the patients live, the following Tables will be of interest :—

HOME CONDITIONS.

Table 9.—Shows the number of rooms in domiciles occupied by tuberculous patients at their first examination.

Year Ended	Rooms in Domicile ☞	One	Two	Three	Four	Five	Six	Seven	Over Seven	Total
31st Dec., 1930	☞ Patients	29	40	97	389	59	49	8	1	672
31st Dec., 1931		21	54	105	536	80	48	15	1	860
31st Dec., 1932		**37**	**53**	**109**	**479**	**78**	**59**	**10**	**1**	**826**

HOME CONDITIONS AT THE FIRST VISIT OF THE NURSE.

Table 10.—Shows the conditions of the homes of the new patients examined during the year, on the first visit of the Nurse.

Year Ended	Excep. Good	Very Good	Good	Aver-age	Bad	Very Bad	Excep. Bad	Total
31st Dec., 1930	7	25	121	413	76	25	5	672
31st Dec., 1931	3	16	123	579	94	37	8	860
31st Dec., 1932	**3**	**17**	**127**	**536**	**87**	**45**	**11**	**826**

The decision as to which of the above headings the condition of the home shall be placed under, has been arrived at after careful consideration of the number of inmates in the house, its cleanliness, ventilation, etc.

PERSONS IN THE SAME BEDROOM AS THE PATIENT.

Table 11.—Shows the number of tuberculous patients sleeping in the **same bedroom** with other persons, as ascertained at the first visit of the nurse.

Year Ended	Alone	With 1 other	With 2 others	With 3 others	With 4 others	With 5 others	With 6 others	With 7 others or over	Total
31st Dec., 1930	141	251	150	85	28	13	2	2	672
31st Dec., 1931	153	337	202	88	46	22	7	5	860
31st Dec., 1932	**147**	**324**	**187**	**104**	**42**	**11**	**7**	**4**	**826**

It may be mentioned that in one case the patient was sleeping in a room with as many as eight other persons.

PERSONS IN THE SAME BED WITH THE PATIENT.

Table 12.—Shows the number of tuberculous patients sleeping in the **same bed** with the undermentioned numbers of other persons, as ascertained at the first visit of the nurse.

Year Ended	Alone	With 1 other	With 2 others	With 3 others	With 4 others	With 5 others or over	Total
31st Dec., 1930	198	305	129	33	7	0	672
31st Dec., 1931	231	410	169	36	9	5	860
31st Dec., 1932	219	407	154	39	5	2	826

SPITTING.

The spread of infection within the house is bad enough, and sometimes inevitable in over-crowded conditions, but there is no excuse for the offensive habit of spitting in the streets and public conveyances, where the sputum is liable to be dried and carried into the air or borne on the feet of the passer-by into the homes of the people.

As I have mentioned in last year's report, I feel apprehensive that this ugly and offensive habit is on the increase. Every person who values his own health and that of the community should regard it as his duty to draw the attention of

Guards, Bus Conductors, Tram Conductors and other responsible public servants to any person seen spitting in a public conveyance, and as a matter of example should abstain from spitting in the street himself.

Spitting is a habit which offends against the most elementary standard of cleanliness, decency and good manners, but it is also a most fruitful medium for the spread of infection.

WHERE THE PATIENTS LIVE.

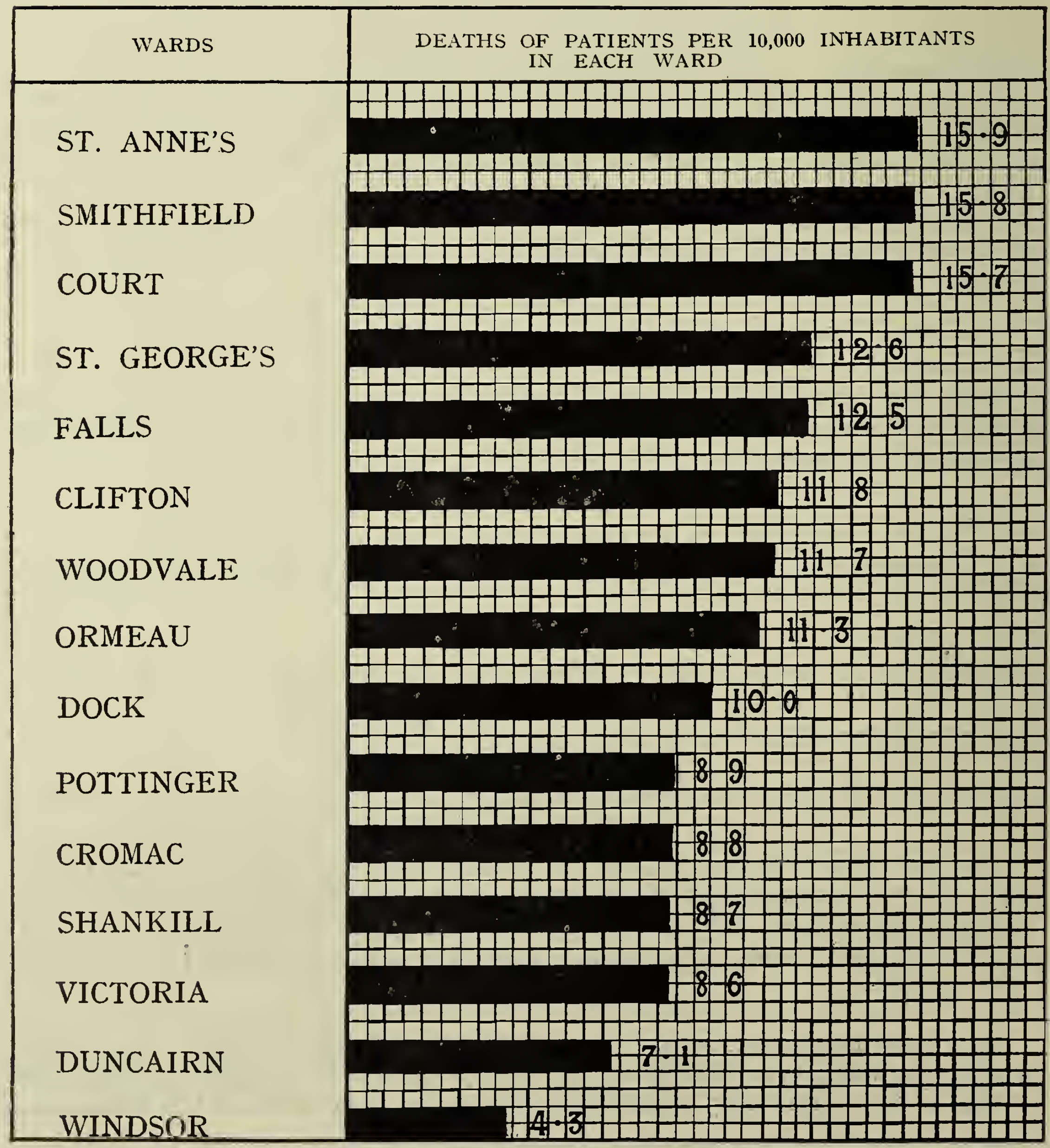
Table 13.—Indicates by wards, arranged in alphabetical order, the localities in which new tuberculous patients lived, at the time of their first examination.

Clifton	61	St. George's	53
Court	70	Shankill	75
Cromac	36	Smithfield	35
Dock	48	Victoria	106
Duncairn	56	Windsor	37
Falls	88	Woodvale	64
Ormeau	87	Outside City Boundary	5
Pottinger	123		
St. Anne's	64	Total	1,008

With this Table showing the localities in which the **patients live,** or were living at their first examination, it is interesting to compare the accompanying Chart, which sets out graphically the wards in which **deaths** from pulmonary tuberculosis took place during the year 1932.

CHART 2.

SHOWS THE DEATHS FROM PULMONARY TUBERCULOSIS AS A RATE PER 10,000 INHABITANTS, LIVING IN THE WARDS IN WHICH THE DEATH OCCURRED (1932).



X-RAY DEPARTMENT.

The new Victor Installation continues to give entire satisfaction, particularly in regard to mechanical precision and film results. During the year 306 X-ray photographs were made ; 221 as a help towards diagnosis of tuberculosis in the lungs, and 85 in connection with the work of the Municipal Hospital for Tuberculous Children at Graymount.

Much greater advantage might be taken of the help afforded by X-ray films in the diagnosis of tubercular disease in the lungs, and also in the estimation of the patient's progress, if the Medical Staff were adequate. It is to be regretted that the constant calls for economy have forced us to curtail the Medical Staff by at least one man during the past five years. I look forward with confidence to the removal of this handicap at an early date.

ARTIFICIAL LIGHT DEPARTMENT.

The artificial light installation (five types of lamps) has done good work during the year, and has proved of great value in the treatment of various forms of tuberculous disease—especially amongst patients suffering from glandular and osseous tuberculosis, lupus, etc., and also amongst delicate children. The new infra-red lamp has been found very useful in the treatment of painful conditions generally, and also in promoting more rapid cure in slowly-healing ulcers.

Table 14.—Shows the number of Light Treatments administered during the year :—

Institute.	Treatments Given					Total
	Carbon Arc	Mercury Vapour	Kromayer	Sollux	Infra Red	
Central	3819	124	47	3	192	4185
A.B. Road ..	—	6687	—	—	—	6687
	3819	6811	47	3	192	10,872

DENTAL DEPARTMENT.

This Department under the supervision of Mr. Osborne Black, continues to be increasingly patronised, and patients derive much benefit from the dental treatment provided.

In addition to the work set out in the table below, Mr. Black also attends one day weekly at the Municipal Sanatorium and one day weekly at Graymount Hospital and Open-Air School.

Table 15.—Shows the nature and amount of the dental work carried out for patients during the year.

Institute	Fillings	Scalings	Dressings	Extractions	Total Treatments
Central	61	—	215	114	390
A.B. Road	142	—	519	144	805
Graymount	219	—	338	16	573
G.O.A. School ..	88	—	184	20	292
Total ..	510	—	1256	294	2060

LABORATORY WORK.

Table 16.—Shows the nature and amount of the laboratory work done during the year.

Year Ended	Examinations.			Tuberculins prepared
	Sputa	Chemical (Sputa & Urines)	Haematological. (Sedimentation & films)	
31st Dec., 1932 ..	841	871	102	41

Table 17.—Shows the result of examinations of sputa for tubercle bacilli and albumin, or albumose.

T.B. + Alb. +	T.B. + Alb. —	T.B. — Alb. —	T.B. — Alb. +
135	7	603	96

ALBUMIN IN SPUTUM.

The following technique has been found satisfactory : Two volumes of 3 per cent. acetic acid is mixed with one volume of sputum to get rid of the mucus. After the solution has been well shaken, it is filtered and tested either by nitric acid or by boiling.

The presence of albumin, proteins or proteose in sputum is, I think, always a significant sign, and a consideration of Table 17 shows how rarely albumin is absent when tubercle bacilli are found in the sputum. In all probability the presence of albumin, protein, etc. is due to cytolysis, and if the tubercular lesion is active it is natural that these should be present in the suptum.

An interesting research would be the systematic follow-up of the sputum found T.B. negative and albumin positive, but here again the exigencies of routine clinical work occupy the available time of our inadequate Medical Staff.

TREATMENT OF INSURED PERSONS.

Table 18.—Shows the numbers of insured and non-insured persons examined for the first time, or whose diagnosis was made definite, during the year 1932.

Year	Insured & Exempt		Total	Per cent of Grand Total	Non-Insured		Total	Per cent. of Grand Total	Grand Total
	Male	Female			Male	Female			
1932	304	326	630	31%	627	756	1383	69%	2013

Table 19.—Shows the number of patients found on examination to be tuberculous or " suspect " requiring treatment, and number found to be non-tuberculous.

Year	Tuberculous or Suspect				Total	Per cent of Grand Total	Non-Tuberculous				Total	Per cent of Grand Total	Grand Total
	Insured		Non-Insured				Insured		Non-Insured				
	M.	F.	M.	F.			M.	F.	M.	F.			
1932	243	244	308	390	1185	59%	61	82	319	366	744	38%	1981

The grand total includes 124 " suspects " transferred in the year under review to the tuberculous or non-tuberculous class.

Table 20.—Shows the forms of tuberculosis from which new insured patients examined during the year were found to be suffering.

Year	Pulmonary		Glandular		Osseous		Abdominal		Other or General		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1932	196	178	2	7	4	2	2	5	5	4	405

The number of Insured persons under supervision or treated, throughout the year was 2,886. The number on Panel treatment at the end of the year, compared with previous years, is shown in the following table.

Table 21.—Shows the number of insured persons on treatment or under medical supervision at the end of the years indicated.

Year	1925	1926	1927	1928	1929	1930	1931	1932
Persons	1740	1664	1784	1817	1909	1806	2068	2448

TREATMENT OF EX-SERVICE MEMBERS.

The number of men who served in the war, examined for the first time during the year, was 31 as compared with 32 in the year 1931.

Table 22.—Shows the number of Discharged Service members on the various forms of treatment, at the dates mentioned.

Date	Institute	Panel	Sanatorium	Total
31st December, 1930 ..	101	179	5	285
31st December, 1931 ..	28	204	6	238
31st December, 1932 ..	**37**	**158**	**8**	**203**

MUNICIPAL SANATORIUM.

During the year 606 patients were admitted to the Belfast Municipal Sanatorium at Whiteabbey, and 530 were discharged. (For fuller details of the work carried on at the Institution reference should be made to the Report of the Resident Medical Superintendent, Dr. P. S. Walker).

I regret that in the case of a large number of patients admitted to the Sanatorium we have no choice either of the stage at which they are admitted, or of their suitability for institutional treatment, but the difficulties experienced in persuading the proper type of patient to enter the Sanatorium for treatment at a sufficiently early stage in the disease, are not confined to Belfast ; they are a disappointing feature of the work of almost every other Tuberculosis Scheme in the Kingdom. Thus. the Medical Superintendent of King George V. Sanatorium (a London County Council Institution) while expressing the opinion that " every patient whose disease is not quiescent or arrested ought to have a period of residence in a Sanatorium, says in a recent Report, " *We must abandon the idea that the Sanatorium is an institution for early cases.*" Unfortunately the prospect of persuading patients to go into the Sanatorium in the early stages of the disease is almost hopeless. To quote further from the Report of the Superintendent of the King George V. Sanatorium : " There are not enough early cases seeking treatment to fill more than one quarter of all the Sanatorium beds available in this country, and I doubt very much whether in the future the proportion of early cases is likely to rise to any considerable extent. Rather must the Sanatorium be regarded as a repair depot *for repairable cases in any stage* of the disease."

There is, however, a great need for hospitals for the care and nursing of tuberculous patients who are living in conditions of great discomfort to themselves and of great danger to the remainder of their families. Such hospitals might be used not only for nursing patients with advanced tuberculosis, but a ward might be set apart for the observation of doubtful cases and for the continuance of artificial pneumothorax and other treatment which could not easily be carried out at home, but which does not require residential treatment in a Sanatorium. Such an arrangement would be more attractive to patients and their friends if these hospitals were within easy distance of their homes, and it would be more economical than treatmente in the Sanatorium.

GRAYMOUNT HOSPITAL.

Since the opening of Graymount Hospital 301 patients have been admitted suffering from the various forms of non-pulmonary (especially osseous) tuberculosis. In over 80% of the patients discharged the disease was apparently cured. (For full details of the work carried on at the Municipal Hospital for Tuberculous Children, Graymount, reference should be made to the Report of the Visiting Surgeon, Mr. H. P. Malcolm, M.C.)

GRAYMOUNT OPEN-AIR SCHOOL.

The Open-Air School divided into Day and Hospital Sections, under the supervision of Miss Thompson and her four assistants, continues to fulfil a most important function.

I think it well to make it plain that the children attending the open-air school (day section) are not themselves actually suffering from clinical tuberculosis though they are living in daily association with parents or relatives suffering from the disease, and it is hoped that the good food, fresh air, mid-day rest, and general training in habits of cleanliness will go far to cut down the bridges to infection in the home, and to increase bodily resistance to the disease.

The average daily attendance at both sections of the School during the year was as under :—

Day Section	102.9
Hospital Section (exclusive of children under school age)	41.0
Total daily average at both Sections ..	144.0
Number on Rolls at 31/12/32	163.0

The School is so popular that the demands for admission continue to be far in excess of the accommodation available. In addition to our own requirements those of the School Medical Officer (Dr. T. S. Fulton) would easily provide pupils for several more such schools.

School years are the most important in the whole life of an individual, for during these years the foundations of health may be either strengthened, or sapped, and habits of mind and body formed which may conduce either to the happiness or the misery of the individual throughout his whole after-lifetime.

INSTITUTIONAL ACCOMMODATION.

In accordance with a request from the Ministry of Home Affairs, the following particulars are set out annually :—

Hospitals provided by the Sanitary Authority or the County Council.

Tuberculosis Hospitals.

1. Municipal Hospital for Tuberculosis Children, Graymount, Belfast. (For the treatment of non-pulmonary tuberculosis in children) .. .. 58 beds
2. Municipal Sanatorium, Whiteabbey, Co. Antrim. (For all forms of tuberculosis in adults and children). .. .. 285 beds

Clinics and Treatment Centres.

1. Central Tuberculosis Institute, Durham Street, Belfast.
2. Tuberculosis Institute, 225 Albertbridge Road (Branch).
3. Open-Air School—Day Section—Graymount, Belfast .. .. 120 places

Artificial Light Clinics for Tuberculous Diseases.

1. At Central Tuberculosis Institute, Durham Street, Belfast.
2. At Tuberculosis Institute, 225 Albertbridge Road, Belfast.

TABLE 23

NEW CASES AND MORTALITY DURING 1932.

Age Periods	New Cases		DEATHS.			
	All Forms of Tbs.		Pulmonary		Non-Pulmonary	
	M.	F.	M.	F.	M.	F.
0-4 incl.	41	31	7	6	18	17
5-9 ,,	112	76	5	2	7	3
10-14 ,,	54	75	2	6	3	6
15-19 ,,	52	64	21	35	5	6
20-24 ,,	48	88	33	35	2	2
25-34 ,,	75	105	58	54	6	8
35-44 ,,	40	47	42	44	2	7
45-54 .	34	20	32	16	3	2
55 and upwards	21	25	18	16	2	3
Totals ..	477	531	218	214	48	54

*These figures are compiled from the Returns of deaths occurring in the city submitted by District Registrars to the M.S.O.H. and are subject to correction by the Registrar General.

DEATHS AND DEATH RATES.

The number of deaths from pulmonary tuberculosis in 1932 was 448 as compared with 464 in 1931 and with 836 in 1914. The death rate, therefore, in 1932 was 1.07 per 1,000, a decrease of over 49 per cent. as compared with the rate in 1914.

The number of deaths from non-pulmonary tuberculosis in 1932 was 105, as compared with 104 in 1931, and with 290 in 1914. The death rate, therefore, from non-pulmonary tuberculosis in 1932 was 0.25 per 1,000, as compared with 0.72 in 1914—a reduction in the non-pulmonary mortality rate of 65 per cent. in eighteen years. I think it is fair to attribute this steep fall in the mortality rate from the non-pulmonary forms of tuberculosis to an increasing appreciation of the importance of cleanliness of the person and of the home, and also to a gradual rise in the standard of cleanliness in milk production and distribution.

NOTIFICATION OF TUBERCULOSIS.

Of the 553 persons who died from all forms of tuberculosis during the year, 426 were patients who had been notified either to this Department or to the Medical Officer of Health. Of these 426, 55 (12.9 per cent.) died within one month of notification ; 77 (18 per cent.) lived over one month but died within six months from the date of notification ; while 70 (16 per cent.) lived over six months from the date of notification, but died within one year. In other words no fewer than 202 (47 per cent.) died within one year of notification, and it is our general experience that of the patients dying from tuberculosis in any year not more than 50 per cent. have been known to us for a year or longer.

It will thus be seen that the problem presented to the Tuberculosis Department in respect of these advanced patients is an exceedingly difficult one. It is not so much a question of endeavouring to effect a cure as of rendering what human comfort is possible to the patient, and of delimiting infection in the home where he is spending the remainder of his days.

I had confidently expected that the coming into force of Medical Benefit would have led to an increase in the number of persons applying for treatment in the early stages of their disease, but it seems to be an unfortunate psychological habit of the definitely tuberculous patient either to postpone his visit to the doctor to as distant a date as possible, or, if he does consult his doctor, to neglect his advice in the vain hope that his condition is not so serious as the doctor says.

MILK.

I am glad to observe that the use of Grade A (tuberculin tested) milk is increasing in the city of Belfast. As an indication of the increasing demand for Grade A (T.T.) milk in Northern Ireland, it is interesting to note that whereas for the year ended September, 1928, there were only thirteen producers and retailers in the whole of Northern Ireland, in the year ended 30th September, 1932, the number had increased to 58.

If Grade A (T.T.) milk (or if Grade A T.T. is too expensive, then pastuerised milk) were in universal use, I have no doubt that in a few years their use would be justified by a still sharper fall in the mortality from the non-pulmonary forms of tuberculosis.

CHART 3.

SHOWING THE INCIDENCE OF MORTALITY FROM PULMONARY TUBERCULOSIS AMONGST MALES AND FEMALES IN AGE-PERIODS OF FIVE YEARS, CALCULATED PER 1,000 MALES AND FEMALES LIVING IN EACH AGE-PERIOD, FOR THE YEAR ENDED 31st DECEMBER, 1932.

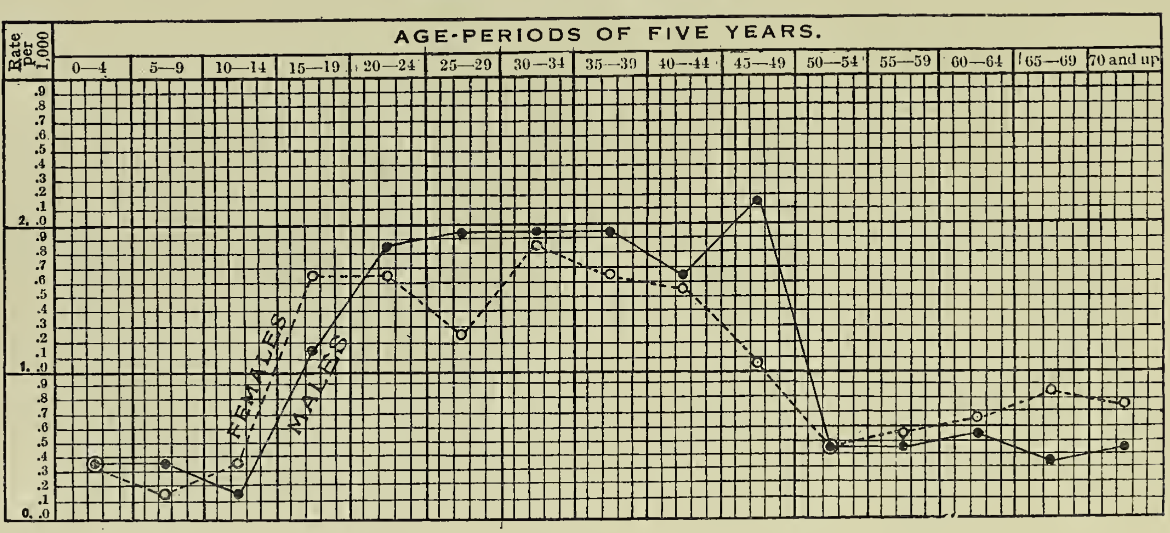
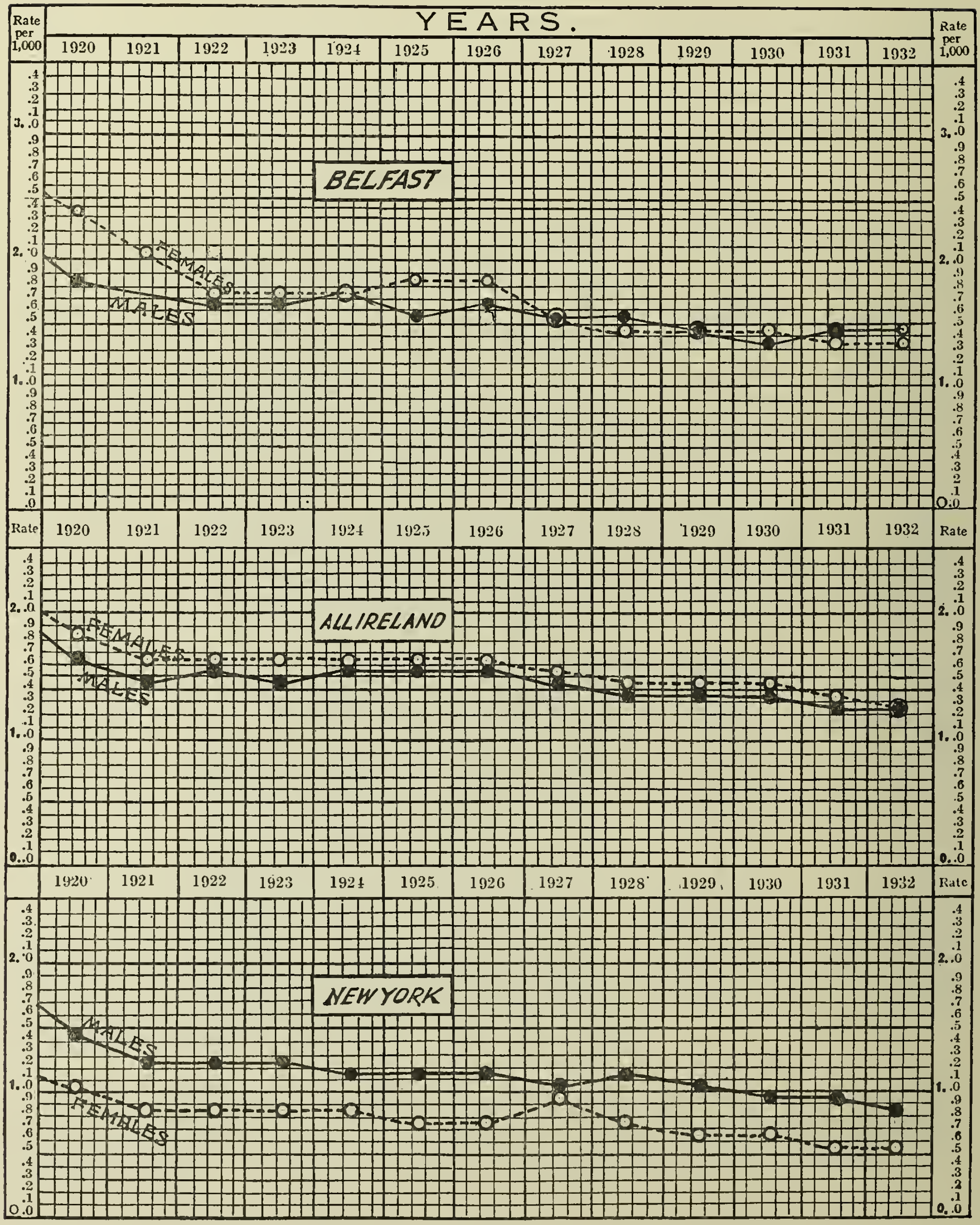


CHART 4.

SHOWS THE COMPARATIVE INCIDENCE OF THE MORTALITY FROM ALL FORMS OF TUBERCULOSIS AMONGST MALES AND FEMALES IN BELFAST, IRELAND, AND NEW YORK.



PREGNANCY AND TUBERCULOSIS.

Regarding the effects of pregnancy on tuberculosis and of tuberculosis on pregnancy, I have made recent enquiry into the results of pregnancy in tuberculous mothers, and the results are set out hereunder :—

Table 24.—Shows the end results of pregnancy in tuberculous mothers :—

	Miscarried	Delivered of—			Total
		Living Full-term child	Premature child	Deadborn child	
No.	80	1336	22	29	1467
Percentage	5.5%	91%	1.5%	2%	100%

With regard to the condition of children born of tuberculous mothers : we have kept records of the condition of a number of these children over a period of nine years. All these children were born since the mothers were diagnosed tuberculous, and the reports on their health at the end of the year 1932 were as follows :—

Table 25.—Shows the condition of 1,176 children born of tuberculous mothers.

	Healthy	Delicate	Tuberculous	Dead	Total
No.	860	129	37	150	1176
Per Cent.	73.1%	11%	3.1%	12.8%	100%

CLIMATIC CONDITIONS.

It is a matter for regret that the capital of Northern Ireland should still lack an official meteorological station, for although private observers give records of rainfall, air temperature, etc., no record is available of the hours of bright sunshine in Belfast. In the absence of such a record it is impossible to say whether Belfast is better or worse off in this respect than other cities, but in an industrial city like ours the amount of sunshine which reaches the ground level must be seriously lessened by domestic and industrial smoke, thus retarding the normal growth of children, and impairing the health of the community.

I am indebted to Miss Firth, of Cavehill Road, for the following figures :—

RAINFALL.

Table 26.—Shows the Rainfall in inches and the days on which rain fell during the year 1932, as compared with 1930, and 1931.

Year	Rainfall in inches.	Days on which rain fell.
1930	42.05	244
1931	43.25	263
1932	38.19	261

February with 0.20 ins. of rain was the driest month of the year ; December with 6.10 was the wettest.

SUMMARY.

1. During the year 1,889 persons notified as suffering from signs of tuberculosis in various forms were examined, as compared with 1,894 in the previous year (vide Table 1).

2. Of the 1,889 persons examined during the year, 50 per cent. were found to be tuberculous, and 9 per cent. "suspect," while 41 per cent. were regarded as not suffering from tuberculosis (vide Table 2).

3. The re-attendances of old patients at the Institutes, for examination and treatment, numbered 22,589 as compared with 20,716 in the year 1931. This in addition to the 1,889 new patients examined, makes a total of 24,478 attendances and treatments during the year. 163 old patients were too ill to attend the Institutes and were re-examined in their own homes, and 84 were re-examined at the Belfast Infirmary, by the Staff of the Institutes. This, of course is exclusive of attendances on patients in their own homes by Panel Doctors, and Domiciliary Doctors acting under the scheme of the Corporation.

4. The numbers of patients on the various forms of treatment at the 31st December were as follows:—

Institutes	2,038
Panel and Domiciliary	3,435
Sanatorium	273
Graymount Hospital	58
Graymount O.A. School	124
Total	5,928

5. The number of visits paid by the Visiting Nurses to patients in their own homes during the year was 31,065.

6. The total number of patients who received treatment during the year was 7,179.

7. **Table 27.**—Shows the **results of treatment** according to the reports received from Institute, Institutional, Domiciliary, and Panel Doctors:—

Form of Treatment.	Reports received throughout the Year.	Condition as shown in Reports received during the last Quarter of the Year.				
	D.A.C.* or D.Q.	G.I.	Imp.	I.S.Q.	Worse	Total.
In Municipal San. ..	1	17	149	64	6	237
Discharged Municipal Sanatorium ..	20	2	84	36	1	143
In Graymount Hospital	6	27	15	7	..	55
Discharged Graymount Hospital ..	13	1	..	1	..	15
At Graymount Open Air School ..	..	1	92	37	..	130
Domiciliary and Panel	158	85	686	1,720	172	2,821
Institutes ..	6	6	432	306	3	753
Total ..	204	139	1,458	2,171	182	4,154

*D.A.C.—Disease apparently cured.
D.Q.—Disease Quiescent.
G.I.—Greatly Improved.
Imp.—Improved.
I.S.Q.—In Statu quo.

8. During the year 448 persons died of the pulmonary form of tuberculosis and 105 of the non-pulmonary forms as compared with 464 and 104 respectively in the preceding year.

9. Of the 553 persons who died in Belfast from all forms of tuberculosis during the year, 426 were patients under the care of this Department. Of these, 55 died within one month of their first examination by us ; 132 within six months ; 202, or over 47 per cent. within one year. From these figures it may be inferred that the stage at which patients are first notified is often too late to admit of effective treatment.

10. **Table 28.**—Shows the declining trend of the death rate from pulmonary tuberculosis in Belfast during the last 15 years :—

Year.	No. of Deaths.	Death rate per 100,000.	Comparison with 1918 as 100.
1918	1051	267	100
1919	853	212	81.16
1920	762	184	72.5
1921	677	161	64.4
1922	624	147	59.37
1923	571	133	54.33
1924	605	139	57.56
1925	575	131	54.7
1926	570	136	54.2
1927	515	124	49.0
1928	499	120	47.3
1929	485	116	46.14
1930	426	102	40.5
1930	464	111	44.1
1932	448	107	42.6

From this Table it will be seen that for every 100 persons who died of Pulmonary tuberculosis in Belfast in 1918, only 42.6 died of the disease in 1932—a reduction in the rate of more than 57 per cent. in fourteen years.

I am, Ladies and Gentlemen,

Your obedient servant,

Andrew Trimble

Chief Tuberculosis Officer.

MUNICIPAL SANATORIUM, WHITEABBEY.

REPORT

OF THE

Medical Superintendent.

MEMBERS OF THE TUBERCULOSIS COMMITTEE, 1932.

THE RIGHT HONOURABLE THE LORD MAYOR,
Councillor SIR CRAWFORD M'CULLAGH, J.P.

Councillor W. A. COCHRANE, J.P.
(Chairman).

Councillor C. SCOTT
(Deputy Chairman).

Alderman W. H. ALEXANDER.
Alderman R. PIERCE.
Alderman DR. J. D. WILLIAMSON, J.P.

Councillor J. BOYLE.
Councillor MRS. J. COLEMAN.
Councillor LT. COM. R. M. HARCOURT.
Councillor M. HOPKINS, J.P.
Councillor J. HOLLAND.
Councillor S. KYLE.
Councillor DR. H. P. LOWE.
Councillor M. M'KIBBIN.
Councillor R. J. GROVES.

Miss E. M'COMB.
Mr. K. M. ALEXANDER, F.I.A.A.
Mr. JAMES PARKHILL, J.P.

STAFF OF THE DEPARTMENT.

Medical Superintendent	..	Dr. P. S. Walker.
Visiting Physician	..	Dr. J. C. Rankin.
Assistant Medical Officer	..	Dr. D. K. Watterson.
House Physician	..	Dr. A. E. Lavelle.
Visiting Dental Surgeon	..	Mr. O. Black, L.D.S.
Visiting Chaplains	..	Rev. W. B. M'Murray, B.A.
,, ,,	..	Rev. F. Maguire, B.A.
,, ,,	..	Very Rev. J. O'Neil, P.P., V.F.,
Matron	..	Miss E. Woods, S.R.N.
Steward	..	Mr. Stewart Finlay.
School Mistress	..	Miss E. Dunlop.
,, ,,	..	Miss E. Hamilton.

THE REPORT OF THE MEDICAL SUPERINTENDENT

ON THE WORKING OF

THE BELFAST MUNICIPAL SANATORIUM,

For the Year ended 31st December, 1932.

Submitted to the Medical Superintendent Officer of Health through the Chairman and Members of the Tuberculosis Committee.

Mr. Chairman, Ladies and Gentlemen,

I have the honour to submit to you my Ninth Annual Report on the workng and progress of the City Sanatorium.

The customary sections and statistical schedules have been followed in order to facilitate comparative reference and to preserve the formal continuity of these annual statements.

Situation.—The Municipal Sanatorium is situated on the southern slopes of the Belfast Hills, overlooking Belfast Lough, five and a half miles north of the city centre. The vista embraces the opposite coast of Co. Down, the coast of Scotland, the Copeland Isles and Lighthouse, the Antrim Coast, the town of Carrickfergus and Kilroot Point. The Belfast Hills which tower behind shelter the site from cold winds.

Maintenance.—One half of the current maintenance charges is contributed by the State and one half by the Local Authority. The latter is responsible financially for all charges and commitments of a capital nature.

Capacity.—285 beds are provided. All types and classes of patient at all ages are admitted, the sanatorium being equipped for the treatment of cases of pulmonary and non-pulmonary disease. The present distribution of the beds is illustrated in the following schedule:—

Table No. 1.

	Pulmonary Tuberculosis.			Surgical Tuberculosis.		Total.
	Ambulant.	(Hospital) Advanced.	(Pavilions) Convalescent.	Hospital.	Pavilions.	
Children ..	..	..	28	..	36	64
Males ..	75	25	22	12	..	134
Females ..	..	25	54	8	..	87
Total ..	75	50	104	20	36	285

Type of Case.—The average type of case coming under residential treatment indicates little change as compared with that of previous years. A large proportion on clinical examination reveals disease of a chronic nature. Cases with limited or unilateral disease remain rare and yet it is in regard to such cases that the sanatorium can best justify its economical existence. Cases of surgical disease are still received at a stage when the curtain is rung down upon anything but extemporising measures.

Undoubtedly the early history of all forms of tuberculosis is treacherous and perhaps misleading, but this does not render it any the more palatable to have patients transferred to the sanatorium from other authorities or hospitals after a sojourn in the latter for weeks, months, and occasionally years.

Duration of Residence.—The average duration of residence was 168 days per patient.

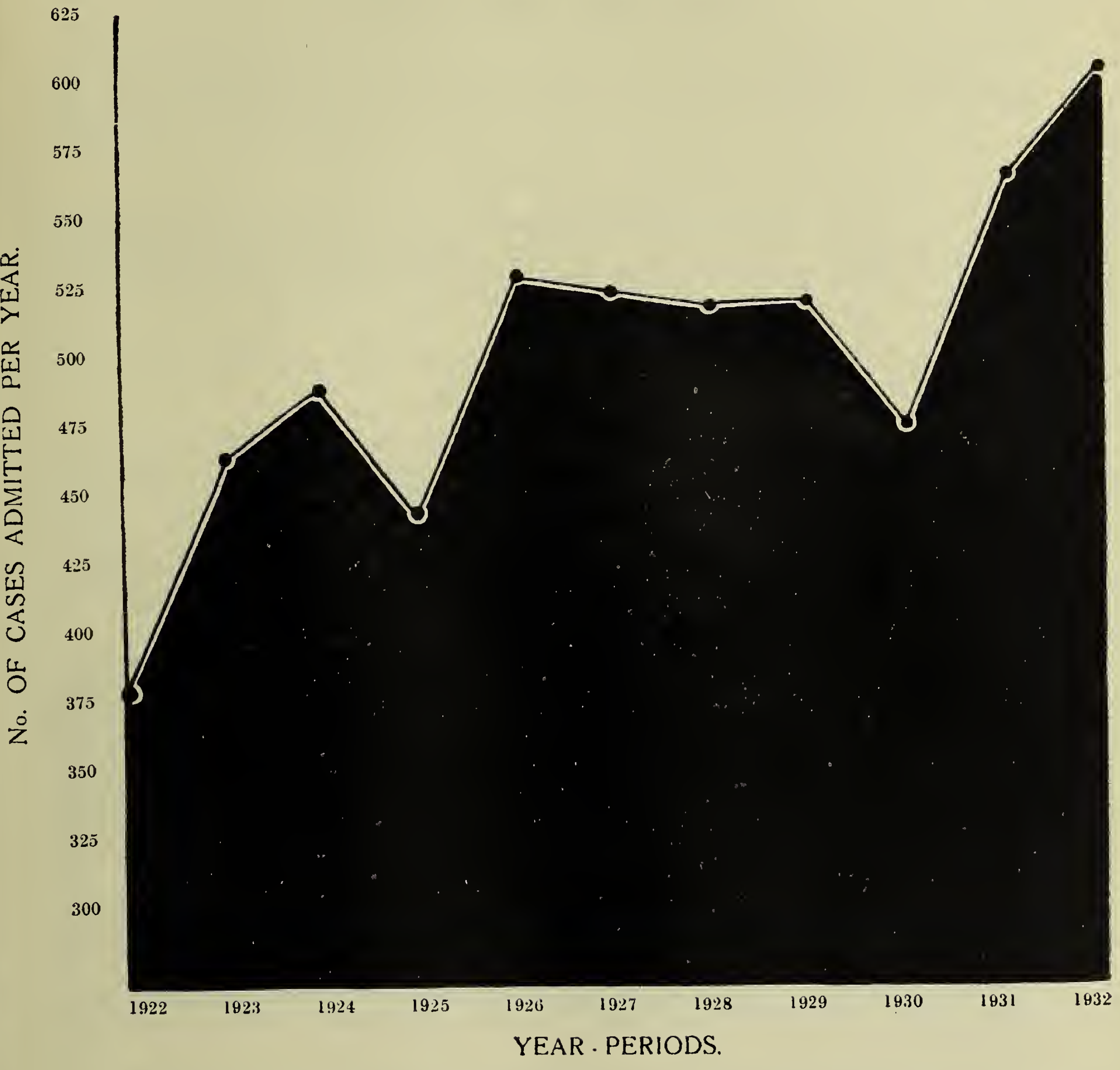
Accommodation (Patients).—The principal feature of the year has been a persistent and increased demand for beds. In consequence the question of accommodation has loomed largely in the minds of all associated with the Tuberculosis Scheme in Belfast. Early in the year it became evident that the number of requests and recommendations for admission to the sanatorium was likely to reach unprecedented proportions ; at one time the waiting list actually reached three figures. As a result the duration of residence per patient was reduced to a minimum, and a large number of chronic cases were discharged ; bedfast patients on the other hand could not be so dealt with and in consequence the proportion of these cases rose considerably. However, by systematic re-surveys of all cases coupled with a little (doubtful) encouragement, it has been possible to reduce the waiting list to something like normal proportions, but it is anticipated that not a few of the chronic cases discharged will shortly by force of circumstances be again clamouring for a period of residence. At the latter end of the year the Belfast Board of Guardians at the request of the Tuberculosis Committee came to the rescue in that they have graciously consented to retain in the City Infirmary a number of phthisical patients, whose care is the responsibility of the Municipal Authority.

Under present working conditions the sanatorium is seriously over-crowded. The desirable requirements of eight feet between the centres of bedheads (as recommended by the Ministry of Health) has been reduced to six feet and at times to less in order to cope with the demands for admission. Despite such expedients, it has been found necessary at time to request the Chief Tuberculosis Officer to retain in the city advanced and bedfast patients. A large number of recent admissions require residential treatment for long periods, and furthermore, the impossibility of discharging certain bedridden cases by reason of lack of alternative accommodation increased the difficulties, such retentions seriously further reducing the available turnover of the bed-accommodation.

Having considered the question fully from all points of view, the Tuberculosis Committee in the month of June, resolved that plans be prepared for the Committee's consideration, such plans to embody the necessary enlargement of the hospital and co-incident services and the provision of a service annexe to No. 3 (women's) pavilion. These plans have been duly prepared and have been provisionally approved by the Tuberculosis Committee and the Ministry of Home Affairs.

Staff.—Parallel with the increased number of patients and especially with the increased proportion of bedfast cases, an augmented nursing staff became necessary. A considerable rearrangement of the Nurses' Home has been carried out, but nevertheless the conditions under which the staff live are far from desirable. Night nurses are accommodated in attics : some bedrooms house three or four nurses : lavatory and bathroom accommodation is inadequate ; and there is now no spare room available as an isolation or sick room. For these and other reasons the Tuberculosis Committee, subsequent to a inspection of the various quarters, expressed the opinion that improved staff accommodation should be provided and it was decided that the question of such improvements be incorporated in the general plans for extension of the Sanatorium as a whole.

The Increased Admission Rate and Contributory Factors.—A constant upward trend in the Sanatorium admission rate has been noted for a number of years past, the number of patients admitted in 1922 being 382, and in 1932 being 605. The following is a graph illustrating this feature over a period of 10 years :—



The apparent decline in 1930 was brought about by the admission in 1929 and 1930 of an increasing number of surgical cases which required rather long periods of treatment and consequently reduced for the time being the capacity of the sanatorium so far as admissions were concerned. It was this new development which led up to the necessity of equipping No. 1 Pavilion for the segregation of purely surgical cases.

This increasing demand upon sanatorium accommodation is, in my opinion, the natural sequela to the inauguration of the Panel Medical Service. Notification of tuberculosis became compulsory under this service, and furthermore, the panel practitioner is now actively interested in the question and actively co-operates in an endeavour to get his patients suffering from tuberculosis to accept sanatorium treatment. Other contributory factors (as outlined in a report on this subject issued recently by the Chief Tuberculosis Officer) may be found in the natural increase in the city's population, in the increasing volume of unemployment and co-incident distribution, and in the increasing favour with which hospitals are regarded by the public as compared with twenty years ago.

REPAIRS AND IMPROVEMENTS.

The year 1932 has seen the completion of the extensive programme of improvements commenced in 1931. As an institution for the accommodation of 240 patients (instead of 285) the sanatorium is fairly satisfactory. The more important improvement schemes which have been carried out or completed during the past year are briefly as follows :—

(1). The erection of a **Service Annexe** to No. 1 Pavilion was completed early in the year. This pavilion is now set apart purely for the reception of children suffering from the surgical forms of tuberculosis. The capacity is 36 beds, equally distributed as to sex.

Adult patients suffering from such lesions are still accommodated in the upper flat of the hospital.

(2). Another stretch of the Institution's **Roadways** and the area in front of the Nurses' Home has been laid down in concrete. An acknowledgment is due to the City Surveyor and his departmental staff for the very excellent system of roads and paths now being developed in the grounds. In former years the custom was one of tarspraying annually ; at the best this was a messy and unsatisfactory job : the concrete work now being laid down is much more satisfactory and hygienic, and further, will effect a distinct saving in annual expenditure.

(3). A Hard **Tennis Court** has been laid down in front of the Nurses' Home for the use of the resident staffs. We are under a deep debt of gratitude to the Lady Mayoress who graciously performed the opening ceremony at a sale of work, the proceeds of which were devoted to this object, and who gave us much encouragement of a very practical nature. Thanks are also due to the many good friends who patronised the sale of work and bridge drive and who contributed so generously that the court was declared open free of debt. The surrounds and the netting were kindly provided by the Tuberculosis Committee.

(4). An indirect benefit conferred by the erection of No. 1 Service Annexe was that it rendered the former children's dining room in the nurses' home available for conversion into a probationer nurses' **Recreation Room,** which was urgently required. This room has been tastefully redecorated and furnished, and being of considerable dimensions on the ground floor, suits the purpose admirably.

(5). The upper flat of the hospital has been further equipped in that each patient in this department is now provided with a private **Wardrobe** in addition to a bedside locker. This equipment enables patients to keep their belongings away out of sight safely, and assists greatly in maintaining the wards in proper order. It is hoped that at some future date the four pavilions may be so equipped. Some such provision is definitely required in the women's section, as hats, dresses, etc., etc., are not readily hidden away, and when seen detract seriously from the general appearance.

(6). **Store Rooms** designed to provide separate linen accommodation for both flats in the hospital have been provided.

(7). The **X-Ray Room** with dark room and light lock was available for use early in the year, and has proved a veritable boon.

(8). **Wireless** has been provided in each ward in the hospital and also in the nurses' home. This installation has contributed greatly to the amenities of the institution.

(9). On the 23rd May, 1932, the supply of **Electrical Current** was derived from the City Electrical Department under the Belfast City Electrical Extension Scheme. The change over to the city supply necessitated a complete overhaul of the institution's wiring system which was carried out by the Electrical Department. A reduction in staff followed the change-over, the wages bill being reduced from £443 per annum to £199 per annum. Furthermore, the former plant which had rendered yeoman service for twenty years was beginning to become somewhat costly in maintenance, and the battery required to be replaced. Consequent upon the change-over, the two diesel engines with the attendant equipment and battery have been sold.

It is proposed to utilise the former engine room as a recreation room for the ambulant male patients and the battery house as a dispensary. Both conveniences are very necessary ; the men have no recreation room and in inclement weather must perforce lounge about the wards ; the present dispensary is so small that only immoderate requirements can be stocked.

STAFF COMPLEMENT.

The staff complement reveals a slight reduction in the outdoor personnel and a slight increase in the nursing service.

Heating and Lighting Section.—This staff has now been reduced from one engineer, one assistant, and four firemen, to one fitter and two firemen. This reduction has been brought about by the conversion of the steam plant to slow combustion hot water plant, and by the utilisation of the City Electrical Supply. The salary and wages bill under this heading has been reduced from £1,192 per annum, to £575 per annum, but against this must be placed the cost of current and gas. A further saving is, as already mentioned, the outlay required upon the engines and battery and the maintenance thereof.

Nursing Staff.—One additional staff nurse and three extra probationer nurses have been appointed.

Domestic Staff.—The previous office of sewing maid has been incorporated in the appointment of Housekeeper.

Laboratory.—A Laboratory Technician and X-Ray Attendant has been appointed.

It is regretted that lack of space has deferred again the appointment of a Sister-tutor—an appointment very necessary in order to bring the sanatorium into line with the large training schools, and to improve the status of our nursing service.

The total staff complement of the Sanatorium is now as follows :—

General Staff—

Medical Superintendent	1
Assistant Medical Officers	2
Visiting Physician	1
Visiting Dental Surgeon	1
Visiting Chaplains	3
School Mistresses	2

Clerical Staff—

Steward	1
Clerks	2

Domestic Staff—

Housekeeper	1
Cooks	2
Maids	19

Nursing Staff—

Matron	1
Night Superintendent	1
Sisters	4
Staff Nurses	7
Probationers	25

Mechanical Staff—

Fitter	1
Firemen	2

Outdoor Staff—

Gardener	1
Carpenter	1
Porters	3
Attendants and Labourers	8

Total number of Staff	83
Number of Nursing Staff per 10 beds	1.33
Number of Total* Staff per 10 beds	2.91

*Excluding Chaplains, Teachers and Dental Surgeon.

CLASSIFICATION OF PATIENTS.

The following system of classification of cases and of recording results is followed :—

Classification.

(1) Patients under 15 years of age are classed as children, and those of 15 years and upwards as adults.

(2) Patients are classified according to the organ or parts affected as follows :—

(1) **Pulmonary Tuberculosis** (including tuberculosis of Pleura or Intrathoracic glands).

(2) **Non Pulmonary Tuberculosis** ("Surgical Tuberculosis").

Patients suffering from both pulmonary and non-pulmonary tuberculosis are classified as Pulmonary cases.

(3) Patients suffering from pulmonary tuberculosis are divided into :—

(1) **Class T.B. Minus,** viz., cases in which Tubercle Bacilli have never been demonstrated in the sputum, pleural fluid, fæces, urine, etc.

(2) **Class T.B. Plus,** viz., cases in which the presence of Tubercle Bacilli has at any time been demonstrated.

Class T.B. Plus is further sub-divided into three groups, as follows :—

Group 1.—Cases with slight constitutional disturbance, if any, and in whom the obvious physical signs are of a very limited extent.

Group 2.—Cases which cannot be placed in Groups 1 and 3.

Group 3.—Cases with profound systemic disturbance or constitutional deterioration with marked impairment of function, and with little or no prospect of recovery.

(4) Patients suffering from non-pulmonary tuberculosis are classified according to the site of lesion, as follows :—

(1) Tuberculosis of bones and joints, i.e., "osseous."

(2) Tuberculosis of peritoneum, intestines, or mesenteric glands, i.e., "abdominal."

(3) Tuberculosis of other organs.

(4) Tuberculosis of peripheral glands.

Patients suffering from multiple surgical lesions are classified in one sub-group only, viz., in that applicable to the case which stands highest in the immediately preceding list.

RESULTS OF TREATMENT.

The following terms are used to describe the results of treatment :—

" **Quiescent.**"—Cases which have no symptoms of Tuberculosis, and no signs of Tuberculous disease, except such as are compatible with a completely healed lesion, and in whom the sputum, if any, is free from Tubercle Bacilli.

" **Improved.**"—Cases short of " quiescent," in whom the general health is fair, and the symptoms of Tuberculosis have materially diminished.

" **No Material Improvement.**"—All other patients who are alive.

It will be noted that the terms " arrested," or " recovered," or " cured," do no appear in these reports, and criticism has been at times made along these lines. The Sanatorium being a residential institution such terms are inapplicable, and the use of them would be misleading and erroneous. The official interpretation of such terms explains the position clearly :—

" **Arrested.**"—Cases in which the disease has been " **Quiescent** " for a period of two years.

" **Recovered or Cured.**"—Cases in which the disease has been " **Arrested** " for at least three years

It will therefore be seen that such terms are entirely out of place in a report of an institution, where residence is necessarily measured in months, and not in years.

STATISTICS.

Table No. 2.—Annual Return showing the extent of treatment during year.

	In Institution 1/1/32.	Admitted During Year.	Discharged During Year.	Died.	In Institution 31/12/32.
Number of Patients ..	242	606	530	45	273

Table No. 3.—Annual Return showing the Numbers of Persons admitted during year, classified according to the Type of Disease (excluding 10 cases readmitted).

Type of Case.	Men.	Women.	Children.	Total.
Pulmonary Tuberculosis ..	253	181	77	511
Surgical Tuberculosis	14	14	50	78
Re-Classified	5	1	1	7
Total	272	196	128	596

Table No. 4.—Annual Return showing the Numbers of Persons discharged during the year, classified according to the Type of Disease (excluding 6 cases redischarged).

Type of Case.	Men.	Women.	Children.	Total.
Pulmonary Tuberculosis ..	212	159	76	447
Surgical Tuberculosis	11	18	41	70
Re-Classified	6	1	..	7
Total	229	178	117	524

Table No. 2 indicates that 606 patients were admitted and 530 discharged during the year 1932. These figures constitute records for the Municipal Sanatorium, as will readily be seen on reference to the Graph on page 152.

Tables No. 3 and 4 are analyses of Table No. 2, according to the type of disease. The features of these tables are discussed in the subjoining section. During the year 45 patients died in the sanatorium, previous figures being 46 deaths in 1931, 44 in 1930, and 47 in 1929.

A few patients were admitted in whom after observation and clinical investigation the diagnosis of tuberculosis was not maintained. In other cases patients were admitted for the purpose of observation and fuller clinical investigation. Such cases are briefly noted hereunder :—

1. Cirrhosis of Liver.
2. Duodenal Ulcer.
3. Bronchiectasis.
4. Sarcoma of Foot.
5. Pulmonary Neoplasm.
6. Locomotor Ataxia.
7. Cardiac Valvular Disease.
   (A Child who died in the Sanatorium during the year).

PULMONARY SECTION.

ADMISSIONS.

During the past year 511 patients suffering from pulmonary phthisis, excluding "re-admissions," were received for treatment Table No. 5 indicates these patients scheduled according to age, sex, and stage of disease.

Table No. 5.

	Stage of Disease.	Men.	Women.	Children.	
Pulmonary Phthisis.	Class T.B. Minus ..	94	85	77	256
	Class T.B. Plus :—				
	Group I. ..	4	5	..	9
	Group II. ..	7	6	..	13
	Group III. ..	148	85	..	233
	Total ..	253	181	77	511

The following complications were noted :—

Co-existent Forms of Tuberculosis :—

a. Osseous ..	7
b. Laryngeal ..	21
c. Glandular ..	3
d. Cutaneous ..	4
e. Genito-urinary ..	3
f. Abdominal ..	8
Pneumothorax (spontaneous)	2
Pleural Effusion ..	5
Syphilis	9
Cardiac Lesions	3
Gastro-duodenal Lesions ..	4
Skin Affections	6
Ischio-rectal Abscess ..	5
Eye Conditions	4
Neurasthenia	2
Varicose Veins	3
Renal Affections	5
Bronchitis	7
Diabetes	3
Rheumatic Affections ..	6
Epilepsy	1
Hysteria	1
Psychoneurosis	2
Prostatic Hypertrophy ..	3
Ear Affections	7
Grave's Disease	2

Features of interest arising out of Table No. 5 may be briefly summarised as follows :—

1. The high general admission rate.
2. The increased admission rate of children.
3. The increased sputum-positive rate, which is an index of infectivity.

4. An enquiry into the relevant history of other members of the family revealed the fact that of the 511 cases suffering from pulmonary phthisis, no less than 252 indicated the presence of antecedent or coincident tuberculosis in the family.

DISCHARGES.

During the same period 453 patients suffering from pulmonary phthisis were discharged (excluding " re-discharged " and " re-classified " cases), and 43 died.

The results of treatment of these cases are indicated in Table No. 6, scheduled under the various classifications as already explained.

Table No. 6.

		DURATION OF TREATMENT.												
Condition upon Admission.	Condition upon Discharge.	Under 3 Months.			3 to 6 Months.			Under 1 Year.			Over 1 Year.			Total
		M.	W.	Ch.	M.	W.	Ch.	M.	W.	Ch.	M.	W.	Ch.	
Class T. B. Minus	Quiescent	..	..	..	1	1	8	..	..	3	1	..	..	14
	Improved	20	34	23	26	17	19	18	9	9	6	4	..	185
	N. M. Imp.	15	22	12	2	1	1	2	..	..	1	..	..	56
	Died	4	..	..	..	..	..	..	..	..	..	..	..	4
Class T.B. Plus—Group 1	Quiescent	..	..	..	..	..	..	..	..	..	..	..	..	..
	Improved	..	..	..	3	..	..	..	..	..	..	..	..	3
	N. M. Imp.	..	..	..	..	..	..	..	..	..	..	..	..	..
	Died	..	..	..	..	..	..	..	..	..	..	..	..	..
Class T. B. Plus—Group 2	Quiescent	..	..	..	..	..	..	..	..	..	..	..	..	..
	Improved	1	2	..	..	..	..	..	..	..	..	..	..	3
	N. M. Imp.	1	..	..	..	..	..	..	..	..	..	..	..	1
	Died	..	..	..	..	..	..	..	..	..	..	..	..	..
Class T. B. Plus—Group 3	Quiescent	..	..	..	..	..	..	..	..	..	1	..	..	1
	Improved	20	17	..	22	14	..	12	1	..	10	4	..	100
	N. M. Imp.	24	23	1	16	3	..	7	2	..	3	5	..	84
	Died	17	5	..	5	3	..	2	4	..	2	1	..	39
	Total ..	102	103	36	75	39	28	41	16	12	24	14	..	490

Features worthy of note may be briefly enumerated as follows :—

(1) Corresponding with the high admission rate, the discharge rate is proportionately high.

(2) That 15 cases left the sanatorium with no sign of disease.

(3) That 291 cases left the sanatorium in an improved or greatly improved condition. The majority of these cases graded " improved " are physically quite fit to be self-supporting, and in not a few with fair care and discretion the improvement should become quiescence.

(4) That 43 patients suffering from pulmonary phthisis died during the year. The relevant data pertaining to these cases will be analysed in a later section.

(5) That no child died from pulmonary phthisis.

(6) That although the average duration of residence per child is shorter than in the case of adults, the condition on discharge is vastly superior.

SURGICAL SECTION.

In the early part of 1932, No. 1 Pavilion was enlarged, equipped, and designated for the treatment of children suffering from the surgical forms of tuberculosis. Up to this inauguration such children had been nursed in the hospital side by side with adults suffering from the same type of lesion. The undesirability of treating children with adults is generally recognised—the children develop either into angels or demons. For this reason the Tuberculosis Committee have made specialised provision for the treatment of all children, whether suffering from pulmonary or surgical disease, in the sanatorium. The new pavilion contains 36 beds—18 boys and 18 girls—and presents in miniature a fully equipped surgical hospital.

ADMISSIONS.

During the year 78 patients were received for treatment for surgical manifestations; of these 50 were children.

Table No. 7 is an analysis of these cases under the headings of sex, age, and disposition of the lesion.

Table No. 7.

	Bones and Joints.	Abdominal.	Glandular.	Other Organs.	Total.
Males	7	5	2	..	14
Females	8	4	2	..	14
Children	18	24	1	7	50
Total	33	33	5	7	78

DISCHARGES.

In this section 70 patients were discharged, and 1 died.

Table No. 8 gives a summary of the results of treatment of these cases.

Table No. 8.

		Duration of Treatment.												
Type of Disease upon Admission.	Condition upon Discharge.	Under 3 Months.			Under 6 Months.			Under 1 Year.			Over 1 Year.			Total
		M.	W.	Ch.	M.	W.	Ch.	M.	W.	Ch.	M.	W.	Ch.	
Osseous	Quiescent	..	..	1	..	..	..	..	..	..	2	1	3	7
	Improved	4	..	1	..	1	2	..	1	..	..	3	7	19
	N.M. Imp.	1	2	..	..	1	2	1	..	..	..	..	1	8
	Died	..	..	..	..	..	..	1	..	..	..	..	..	1
Abdominal	Quiescent	..	..	..	..	..	3	..	1	..	..	..	..	4
	Improved	1	3	3	..	..	5	..	..	..	..	..	..	12
	N. M. Imp.	1	1	6	..	..	..	..	..	..	..	..	..	8
	Died	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Organs.	Quiescent	..	..	..	..	..	..	..	..	..	..	..	1	1
	Improved	..	..	..	..	..	1	..	..	..	..	..	..	1
	N. M. Imp.	..	..	..	..	1	..	..	..	..	..	..	..	1
	Died	..	..	..	..	..	..	..	..	..	..	..	..	..
Glandular	Quiescent	..	2	..	..	..	..	..	..	..	..	..	3	5
	Improved	..	1	1	1	..	..	..	..	..	..	..	1	4
	N. M. Imp.	..	..	..	..	..	..	..	..	..	..	..	..	..
	Died	..	..	..	..	..	..	..	..	..	..	..	..	..
	Total ..	7	9	12	1	3	13	2	2	..	2	4	16	71

Features to be noted are briefly :—

(1) That 70 patients were discharged during the year from the surgical department.

(2) That of these 41 were children.

(3) That the disease was healed in 17 cases, and was definitely improved in a further 36 cases. These figures are very satisfactory when considered in conjunction with the average type of case admitted.

(4) That here again the family history revealed the presence of antecedent or coincident tuberculosis in the family, in 37 cases.

INFECTIOUS DISEASE.

One case of faucial diphtheria and two cases of chickenpox occurred during the year. The sanatorium is notably free from outbreaks of infectious disease. This is rather remarkable in that no reception pavilion is available, and that the patients' personal laundry is taken home to be washed and returned. It is probable that the regularised routine of life coupled with the good food and plenty of sleep combine to raise the individual immunity so as to throw off infections which under less suitable conditions would develop into serious disease.

DEATHS.

Forty-five patients died during the year.

The Duration of Residence of these patients in the sanatorium prior to death was :—

	DAYS.			MONTHS.				YEARS.
	1-7	8-20	21-30	1-2	2-4	4-8	8-12	Over 1 Year.
No. of Cases. ..	4	3	2	5	13	7	7	4

Table No. 9 shows the age-periods in years, between which death occurred :—

	Up to 14 Years.	15-20 Years.	21-25 Years.	26-30 Years.	31-35 Years.	36-40 Years.	41-45 Years.	Over 46 Years.
No. of Deaths. ..	*1	6	10	6	10	1	5	6

*Cardiac Case.

Family History.—In 18 cases a history of antecedent tuberculosis in the family was obtained.

Sputum Examination.—In 39 (**over 90 per cent.**) of these cases bacteriological examination of the sputum upon admission revealed the presence of tubercle bacilli. No comment is necessary.

EXTERN SECTION.

During the past months a rather unusual sphere of activity for a sanatorium has arisen. I refer to what is virtually the nucleus of an Extern Department. Certain patients who have received collapse therapy (i.e., treatment by artificial pneumothorax) now return to the sanatorium at intervals for refills. Another class is that of patients who have undergone such treatment elsewhere and who return to the city before the period of immobilization has expired.

During the past year 6 patients had their collapse treatments continued here. One patient in the latter category was merely holidaying in Ulster and desired to have her refills maintained during her period of sojourn here.

The No. of such patients	6
The No. of refills given	74
The No. of skiagrams taken	37

TREATMENT.

No change has taken place in the realm of treatment during the year 1932. Lung Immobilization and chemotherapy still form sheet-anchors when dealing with pulmonary phthisis ; in the field of surgical disease conservative treatment aided by light, natural or artificial, is the mainstay.

It is interesting to note how the pendulum swings in regard to the basic question of rest and exercise. Training colonies for the consumptive are becoming truly fashionable. Some years ago the patients in a well-known sanatorium built a large green-house and excavated and constructed a reservoir holding 500,000 gallons. Since then all kinds of progeny such as colonies for occupational therapy, colonies for vocational therapy, colonies for training the tuberculous, etc., etc., have arisen until the very name sanatorium practically means a mercantile or manufacturing establishment wherein the employees are the victims of tuberculosis, but who nevertheless live happily ever after ! On the other hand, I content myself with quoting an extract from the " Lancet " of December 24th 1932, wherein Dr. H. Batty Shaw " spoke very strongly of the harm done by exercise in cases of active tuberculosis. Rest of the lung, he said, had been shewn to be undoubtedly the best form of treatment, and yet patients treated in a sanatorium might be encouraged to go for walks of several miles or to play golf, or allowed to work at carpentry or gardening. Rest being the most effective form of treatment the sooner it was applied, the more completely it was applied, and the longer it was applied the better."

The usual lines of specialised therapy were followed wherever indicated. Unfortunately the number of patients suitable for these modes of treatment is few, and many patients who beg for " gold " or " collapse " have to be refused on the grounds of possible danger and general unsuitability. A brief note is appended of the various procedures practised throughout the year :—

Lung Immobilization.—Collapse therapy has been carried out in 7 cases involving some 87 operations.

Gold Therapy.—19 patients received treatment with sanocrysin, 2 with crisalbine, and 7 with solganol—these preparations being various compounds of gold. The latter mentioned salt is stated to be and apparently is free from the reactions which attend the use of the former salts, but my experience tends to favour the occurrence of controlled reactions and as regards the permanency of the results I prefer sanocrysin. Crisalbine appears to act in much the same manner as sanocrysin, and it is proposed in the coming year to make a fuller use of it.

Tuberculin.—Tuberculin is only used in this sanatorium when dealing with children. It is agreed that the great wave of enthusiasm which greeted its introduction has not justified its indiscriminate use, but has rather called for a judicious discrimination. I have been much impressed by the results attending its use in gradually increasing fractional doses in children, of whom 24 were so treated during 1932.

Ruppel's Serum.—Serotherapy is utilised merely as an auxiliary to other sanatorium treatment. It undoubtedly relieves symptoms, but its forte would seem to be in hastening the improvement in a case making slow progress.

Actinotherapy.—Our equipment under this heading now consists of seven radiant heat lamps and 2 carbon arc lamps. 53 patients received treatment by artificial light, the total number of exposures being 1,841. Light therapy is indicated in non-pulmonary disease only, pulmonary patients being totally unsuitable.

Dental Report.—The provision of dental facilities gives highly satisfactory results. Apart from the question of immediate suffering the services of the Visiting Dental Surgeon are prophylactic in character and are of much value when administering gold salts. It was early apparent in this respect that a thorough overhaul of the mouth and masticatory apparatus reduced the intensity of the reactionary sequelae. In the case of children the teaching of oral hygiene will bring its own reward. Treatment in such patients is necessarily as conservative as possible, measures being directed towards a healthy eruption of the second dentition.

I append the report of the Visiting Dental Surgeon :—

" WHITEABBEY SANATORIUM.

JANUARY 1ST—DECEMBER 31ST, 1932

Fillings	172
Dressings	454
Extractions	111
Total Treatments ..	737

Many of the adults by their own carelessness or ignorance have allowed their teeth to fall into such a condition that not only proper mastication of food is impossible but also the presence of sepsis greatly impairs their bodily constitution. Too often however, an attack of pain is the only cause that brings them to seek relief or advice.

The children who for the most part, have suffered from their parents' neglect after once having had their teeth attended to appear to take a greater interest in their preservation and readily return for inspection or treatment at the earliest symptom of any recurrence of the trouble.

O. BLACK."

LABORATORY.

The work of the laboratory has been steadily prosecuted. It has been possible to extend the scope considerably since the appointment of the laboratory technician.

The sputum of each patient is examined for the presence of tubercle bacilli immediately after admission. If negative the examination is repeated by the " Antiformin Method " monthly for 3 months. It is also examined upon discharge. In the cases of patients undergoing the more specialised forms of treatment bacteriological examinations are performed more frequently.

Other laboratory work includes the estimation of the blood sedimentation rates and nuclear indices of certain patients, especially as a control to the administration of gold salts ; renal efficiency tests ; urine tests for abnormal constituents, infections and presence of gold, etc. ; blood sugar estimations when necessary, etc.,

The following is a summary of the work done :—

(1) Total number of specimens of sputa examined 577, of which 299 were reported as " negative," and 278 were reported as " positive."

It may here be mentioned that it is practically impossible to get samples of sputa for examination from children.

(2) Number of Blood Sedimentation Rates ascertained, 96.

(3) Number of Blood Nuclear Counts determined, 94.

(4) Number of Renal Efficiency Tests performed, 55.

(5) Number of special Urine Examinations made, 106.

Recently I have been interested in the question of gold excretion by patients undergoing gold therapy. It is premature to make as yet any definite statement, but the following comments may be made :—

(1) The excretion of gold takes place practically completely via the renal system.

(2) The rate of excretion varies, but appears to be an exceedingly slow process, gold in certain patients being found in the urine six months after administration.

(3) The rate of excretion appears to be more rapid in advanced and toxic cases than in moderately advanced cases in which the toxaemia is being neutralized by natural means.

It is a matter of clinical experience that patients continue to manifest improvement for some time after the actual administration of the gold compound has ceased ; it is, therefore, perhaps justifiable to assume that such prolonged or delayed improvement is associated with the slow excretion of the drug—in other words, it is dependent upon the retention of the drug in the body.

A permissible hypothesis is that immediately upon the injection the drug is taken up by the reticulo-endothelial system and subsequently slowly liberated into the systemic circulation. In the event of massive toxaemia the reticulo-endothelial system is already taxed to the utmost by the infection and consequently is unable to store up the preparation which is accordingly rapidly excreted. In such cases the storehouse being already fully occupied the force of the injection upon the body is not mimimised and the dangerous reactionary sequelae occur. It is noteworthy also that reactions are " immediate " i.e., they follow quickly upon the administration of the drug. This feature suggests that the reaction occurs whilst the gold is in actual circulation before the storing or shunting mechanism of the system has come into operation. It may accordingly be suggested that the beneficial effects of such modes of therapy is dependant upon a relatively intact reticulo-endothelial system, capable of shunting a certain amount of the gold salt.

It is proposed to prosecute further this line of research during the forthcoming year.

It is once again my pleasure to acknowledge the great assistance rendered to the department by the City Bacteriologist who undertook the following examinations of a technical nature :—

(1) 284 (Wassermann) Blood Examinations.

(2) 69 Swab Examinations.

(3) 7 Bacteriological or Biochemical Examinations of urines.

X-RAY DEPARTMENT.

The excellent Röntgen Ray plant installed last year at the sanatorium has been of the greatest value for purposes of controlling treatment and assisting in diagnosis of doubtful cases. The plant in itself is rendering excellent service, and it has greatly helped the work of the department. X-rays are a most essential adjunct to any treatment centre and become exceptionally valuable in dealing with a protean disease such as tuberculosis. Not only do they confirm the diagnosis, but they also assist in clearing up obscure points caused by or masked by secondary complications or phenomena. At the same time it is my duty to point out that too much dependence should not be placed upon a " negative radiogram"; like a " negative " sputum report it must be considered in conjunction with all other data. I have on occasion seen a negative film of a case indicating early active disease with haemoptysis. More frequently however it comes about that a positive film is obtained in a case with very obscure symptoms, and in moderate cases not unfrequently the film reveals an area of disease greater than that detected by other means. Since the installation of the apparatus in May of the year, 232 skiagrams were taken and 53 screen examinations made—the latter being practically altogether as " controls " to artificial pneumothorax treatment.

EDUCATIONAL SCHEME.

The open air school is carried on under the care and charge of two schoolmistresses.

The average number of children receiving instruction daily in the school during the past year was 73, made up by an average of 29 boys and 44 girls. The maximum daily attendance was 79, and the minimum 60.

The pupils include both up and about children and bed-patients ; the former are generally in the sanatorium for comparatively short periods, whereas the bedpatients, being principally surgical cases, may be in residence for one or two years.

Not a few of the pupils commence their schooling in the sanatorium school, and soon lose the imaginary terror of it.

The older scholars have in many cases been much handicapped by reason of illness and periods of exemption from school, but the response of these children to the regulated life and discipline is gratifying, and their improvement both physically and intellectually is most encouraging.

As the school accommodation is inadequate for present requirements the Tuberculosis Committee have decided to include the erection of a suitable open-air school capable of accommodating 100 patients in the proposed extension programme.

LEARNED SOCIETIES.

In the month of May the Royal Institute of Public Health held its Annual Congress in the city. A large number of the members took advantage of the opportunity to visit the municipal sanatorium and expressed themselves as highly gratified with the lay-out and organisation of the institution. A paper was contributed to the tuberculosis section of the Institute by the Medical Superintendent.

Pursuant to the Committee's instructions the Chairman of the Committee and the Medical Superintendent attended the 43rd Annual Congress of the Royal Sanitary Institute at Brighton in July. Much valuable and useful information was collected, and the opportunities for hearing papers and discussions and for intercourse with delegates and officers of other local authorities has been of great benefit and encouragement to all.

A paper on the subject of " Modern Methods and Treatment of Tuberculosis " was contributed to the Journal of the Ulster Medical Society by the Medical Superintendent.

RELIGIOUS MINISTRATIONS.

The various services and visitations have been conducted by the Chaplains of the individual denominations, and have brought much solace and comfort to the patients.

I should like to take this opportunity of testifying to the very kind and sympathetic manner in which these officers perform their duties by day and by night, and to acknowledging the practical interest they show in the welfare of the sanatorium. Concerts, cinematograph entertainments, and many gifts have been provided by the Chaplains and the churches they represent. Occasionally I have found myself relieved of an awkward situation by the simple procedure of referring an embarassing problem to the respective chaplain of that denomination.

RECREATION.

The claims of recreation have not been forgotten. Throughout the year many successful entertainments have been staged in the Hospital Bungalow by friends interested in the work of the sanatorium.

The 18 hole miniature golf course is much patronised and not unfrequently in the summer queues are in evidence at No. 1 teeing ground. The billiard table provides recreation for the hospital cases in the upper flat. It is hoped that by the time this report is issued the recreation room for the male convalescent patients will be available.

The male patients in residence have organised the " Sanatorium Minstrel Troupe " and have displayed evidence of unsuspected talent. Their turns are much anticipated and heartily encored. Not to be outdone, the women's pavilions have produced " The Honolulu Ladies' Troupe" which bids fair to become a very serious rival to the male minstrel troupe. Thanks to the generosity of the Tuberculosis Committee the Sanatorium Jazz Band has now been equipped with the latest in appropriate " musical " instruments. The combination of these " turns " provides a programme which lacks little in the way of originality and entertainment.

Under the tuition of the school-mistresses the children provided a most enjoyable variety concert, and staged a sketch in a manner which was highly creditable to Miss Dunlop, and her assistant, Miss Hamilton.

Other forms of recreation include periodical whist drives and the like organised by the Patients' Sports Committee, the members of which are elected quarterly by the patients in residence. The functions of this committee are of a dual nature—they organise tournaments and entertainments and are responsible for the care of the billiard table, golf clubs, quoits, cards, etc., they are also responsible for the maintenance of good order and discipline. In this way an element of responsibility is engendered, which has a steadying influence on the life of the institution.

SUMMARY.

1932 was the fiftieth anniversary of the discovery of the tubercle bacillus as the cause of the disease known as tuberculosis. On the evening of the 24th March, 1882, at a meeting of the Berlin Physiological Society, Dr. Robert Koch made the electrifying announcement that he had discovered the microbe causing tuberculosis, thus establishing tuberculosis as an infectious disease. Upon this epoch-making discovery are based all the many methods in force to-day for preventing the spread of the disease. Further, Koch did his best to find a specific remedy for the disease and eight years later he announced the discovery of Tuberculin. This preparation, whilst of much value in diagnosis, has only been of limited value in treatment and is at the present moment the subject of an expert enquiry. Without the knowledge that Koch conferred upon mankind anti-tuberculosis measures could never have been scientifically developed, and they could hardly have obtained the success they have achieved. The whole world owes a debt of gratitude to this German practitioner, who revolutionised the conceptions of disease, which only posterity can pay.

At the Centenary meeting of the British Medical Association in 1932, a discussion on bovine tuberculosis was opened by Dr. A. Stanley Griffith. One point of classical importance stressed by the speaker was that the bovine bacillus is not, as is popularly supposed, of low virulence to man and therefore to be despised. He showed that the bovine bacillus can give rise to every form of tuberculous lesion in the human subject and in every localisation. Simultaneously a mongraph on " Tuberculous Disease in Children," by Dr. J. W. S. Blackrock, published by the Medical Research Council supported Dr. Griffith's contentions, although his results tended to show the bovine bacillus as less virulent than the human organism. Nevertheless his findings confirm that bovine tuberculosis may easily spread and his figures indicate that a very appreciable proportion of fatal or incapacitating childhood tuberculosis can be eradicated by energetic action. These brilliant investigations prove beyond a doubt that both on humanitarian and economical grounds sanatoria would be sounder propositions if they were engaged upon the prosecution of " energetic measures " directed towards the eradication of the disease.

It appears that the old idea of compulsory segregation of advanced tuberculous patients is coming into favour again in certain quarters. This may be a sound procedure with regard to dying cases, but will the public stand for it ? I venture to say it will not, and the practitioner who endeavours to enforce it has my sympathy. Institutions to accommodate dying cases would require to be separate and distinct from sanatoria, otherwise the latter will slowly but surely deteriorate into the former. I fear that not unfrequently (I do not state unnecessarily) the Belfast City Sanatorium is utilised to this end. In the somewhat striking words of my predecessor " the human flotsam is cast upon the sanatorium, in order to postpone his acquaintance with the Stygian waves." It is not intended, however to convey the impression that the sanatorium should be reserved for " early cases," rather it is suggested that cases recommended for treatment should be those capable of deriving benefit. From the sentimental aspect of the problem as it is presented to us in a sanatorium nothing can be more calculated to depress the already anxious mind of a " good " case than to be called upon to occupy the same ward as a number of advanced cases, deaths perhaps occurring during his first few hours of residence. Again, we have some people advocating that good cases should be mixed with advanced patients in order to raise the morale of the latter ! Truly, the wisdom of the serpent is required to find a solution to this problem which would satisfy all.

I fully admit that the alleviation of human suffering is an aim no less worthy than the cure of disease, but economically it is far from sound. An economical scheme might be built upon some basis of universal medical examination with measures for the compulsory treatment of those found in need of the same. Under prevailing circumstances the patient decides whether or no he will accept the advice of his family doctor to report himself at the tuberculosis dispensary ; having arrived at the latter he once again decides whether or no he will go to the sanatorium if so recommended ; having entered the sanatorium he decides whether or no he requires treatment and finally when he will go home again. The same remarks apply to children except in so far as the parent takes the initiative. I have observed year after year courses of treatment of children arbitrarily broken off by parents who would listen to neither rhyme nor reason. Hence, from these two sources comes the " human flotsam " above described. Treatment for such cases as I have mentioned should be compulsorily applied, and probably in a few years time the waiting lists of dying cases would be less of a nightmare.

The year's work resulted in 32 patients having their disease reduced to a clinically quiescent state. These are useful members of the community and are not dangerous to their friends or associates. A further 327 left the sanatorium with the activity of the disease lessened considerably ; a large number of these under good conditions and exercising reasonable care and discretion should remain physically self-supporting. The apparently large number of "improved" cases as compared with "quiescent" cases is brought about by the admission of a large proportion of chronic patients who merely required re-establishment measures. For the remainder the work done must be reckoned in terms of humanitarian considerations.

Finally, for those patients who are discharged from the sanatorium the housing question presents great difficulty. Not less often than once a week I am asked to write a letter to some authority or agent recommending so-and-so for a house. I merely mention how the problem has, I understand, been overcome in a cross-channel municipality. In this case the local authority are allotting 25 per cent. of their new houses to tuberculosis patients, and are advancing a small loan towards the deposit. Certainly, it seems tragic to treat patients in a sanatorium for months or years and then to return them to the squalid conditions whence perhaps they came, with five or six persons to a room and eleven or twelve occupants in a kitchen house.

I desire to acknowledge the support accorded to me by the Chairman and Members of the Tuberculosis Committee, and by the Medical Superintendent Officer of Health who continue to take a deep interest in every detail pertaining to the work of the sanatorium.

I wish also to express my appreciation of the cordial co-operation of my medical officers, the matron, and steward, which renders my superintendency a continuous source of interest and pleasure. To the Nursing Staff, upon whose shoulders falls the weight and brunt of the day, I acknowledge a duty well performed.

I am,

Mr. Chairman, Ladies, and Gentlemen,

Your Obedient Servant,

P. S. WALKER.

MUNICIPAL HOSPITAL FOR TUBERCULOUS CHILDREN, BELFAST.

Report of the Visiting Surgeon.

To the Medical Superintendent Officer of Health.

Dear Doctor Thomson,

I beg to submit my report on the Medical Work at Graymount Hospital for the year 1932.

As in my last report I gave a resumé of the results obtained during the ten years following the foundation of the hospital, I have confined this report to the one year. The average number of patients was discharged and I have given particulars of each in order that the after history may more easily be followed up.

I have the honour to be,

Your obedient Servant,

H. P. MALCOLM,

Visiting Surgeon.

15th February, 1933.

ADMISSIONS DURING 1932.

Nineteen admissions are shown in the register, including three cases re-admitted after temporary discharge to Purdysburn Fever Hospital, and one case admitted for recurrence of hip joint disease three and a half years after previous discharge.

Remaining in hospital on 1st January, 1932		57
Admitted during 1932		16
Re-admitted after temporary transfer		3
Total		76
Discharged during 1932	16	
Temporary transfers	4	
		20
Remaining in hospital on 1st January, 1933		56

CONDITIONS FOR WHICH PATIENTS WERE ADMITTED.

Spinal Caries	8
Hip Joint Disease	2
Tuberculosis of Knee Joint	4
Tuberculosis of Ankle Joint	2
Total	16

DISCHARGES DURING 1932.

Twenty patients were discharged during the year, this number including four temporary discharges on account of infectious disease, and sixteen patients discharged after more or less prolonged treatment. There were no deaths.

Spinal Caries	
Disease Arrested	7
Hip Joint Disease	
Disease Arrested	1
Removed by parents	1
Tuberculosis of Knee Joint	
Disease Arrested	2
Multiple Lesions	
Disease Arrested	3
Incurable	2
Total	16

Details of these patients are given in the following tables.

CASES OF SPINAL CARIES DISCHARGED.

Disease Arrested 7

Reg. No.	Age on Admission.	Sex.	No. of Days Treated.	Condition on Admission.	Cause of Discharge.	Condition on Discharge.
192 and 228	2 years 9 months	M	606 and 1,032	Severe deformity upper thoracic spine.	Disease arrested.	General health good. Deformity slight. Posture erect.
199	7 years 5 months	M	1,273	Lumbar caries with early deformity.	Disease arrested.	In excellent health with slight lumbar kyphos, compensated so that there was no deformity.
201	12 years	F	1,714	Lumbar caries with early kyphos.	Disease arrested.	Stout and well. Body of second lumbar vertebra completely disappeared leaving small angular deformity not affecting upright posture and unnoticeable when dressed.
230	12 years	F	1,170	Caries 11th and 12th thoracic vertebrae. Well marked deformity.	Disease arrested.	In normal health. Disease consolidated leaving small kyphos, well compensated and unnoticeable when dressed.
159 and 226	3 years	F	1,145 and 1,261	Caries 8th and 9th thoracic vertebrae with marked deformity. Chronic disease right ear.	Disease arrested.	General health excellent. No deformity. Ear still discharging.
279 and 284	7 years 4 months	M	63 and 321	Chronic abscess over 12th dorsal spine. No bone lesion seen in X-ray.	Disease Arrested.	General health normal. Abscess healed.
214	8 years	F	, 1,483	Caries lumbar spine with moderate deformity	Disease arrested.	Disease consolidated leaving small lumbar kyphos, unnoticeable when dressed.

TUBERCULOUS HIP JOINT DISEASE.

Disease Arrested 1

Removed by Parents 1

Reg. No.	Age on Admission.	No. of Days Treated	Sex.	Condition on Admission.	Cause of Discharge.	Condition on Discharge.	Joint Movement on Discharge.
225	5 years, 6 months	1,269	F	Spasm of left hip and chronic abscess.	Disease arrested.	General health normal. Hip ankylosed in straight position with one inch shortening due to widening of acetabulum.	None.
250	9 years, 3 months.	834	F	45° flexion of hip and two sinuses.	Removed by parents	Good. Abscesses healed. Head of fermur penetrating acetabulum. Hip stiff in straight position. ? cured.	None.

TUBERCULOSIS OF KNEE JOINT.

Disease Arrested 2

Reg. No.	Age on Admission.	Sex.	No. of Days Treated	Condition on Admission.	Cause of Discharge.	Condition on Discharge.	Joint Movement on Discharge.
229	11 years.	F	1,164	Left knee stiff in extension with one sinus	Disease arrested.	General health normal.	45 degrees movement.
267	8 years, 9 months.	F	508	Periarticular thickening and flexion deformity.	Disease arrested.	General health normal.	Full movement.

MULTIPLE TUBERCULOUS LESIONS.

Incurable 2

Disease Arrested 3

Reg. No.	Age on Admission.	Sex.	No. of Days Treated.	Condition on Admission.	Condition on Discharge.
144	7 years, 6 months.	F	2,393	Positive Wassermann. Suppurative arthritis left knee. Tubercle bacillus found in pus. Later developed spinal caries and caries of left great trochanter and amyloid disease.	Knee healed. Spine and great trochanter still actively diseased. Probably incurable. Parents moved to South of Ireland.
175	12 years, 10 months.	M	1,985	Spinal caries. Multiple abscesses. Peritonitis.	Developed amyloid disease. Transferred to Infirmary. Over age and incurable.
257	2 years, 6 months.	F	569	Sinus over malar bone. Caries left fourth metacarpal with abscess. Caries right little finger with abscess. Otitis media.	In good health. All disease arrested. No discharge from ear.
239 and 271	2 years, 4 months.	M	536	Cervical adenitis. Caries first left metatarsal. Caries right great toe. Caries left thumb.	Disease arrested. All lesions healed. No disability.
266	3 years.	F	523	Chronic abscesses each gluteal region. No bone lesion discovered.	Healed. General health normal.

Fifty-six patients remained in hospital on the 1st January, 1933, twenty-three cases of spinal caries, fifteen of hip joint disease, eleven of tuberculosis of the knee joint, three of tuberculosis of the ankle, three cases of multiple tuberculous lesions, and one doubtful case admitted for observation.

Twenty-one of the spinal cases are doing well, two are unimproved but will probably recover, and in one the outlook is poor.

Two of the hip cases are seriously ill, and the remainder are doing well.

Of the knee cases ten are doing well, and one has a doubtful prognosis.

Two cases of disease of the ankle joint are progressing favourably. One has just died from meningitis. All three cases with multiple lesions are greatly improved.

INFECTIOUS DISEASES.

Three cases of diphtheria occurred, were treated in Purdysburn Fever Hospital and returned to Graymount.

One case of whooping cough was sent to the Infirmary and has not yet been re-admitted.

There were seven cases of ringworm.

OPERATIONS.

There were no major operations. The following minor operations were carried out :—

For Bone Abscess	1
Aspirations	11
Drainage	2

DENTAL TREATMENT.

The Dental Surgeon reports the following treatments :—

Fillings	219
Dressings	338
Extractions	16
Treatments	573

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